THE SCHOOL FRIEND,

AND OHIO SCHOOL JOURNAL.

VOL. V. CINCINNATI, JUNE 1, 1851. NO. 9.

THE SCHOOL FRIEND,
AND OHIO SCHOOL JOURNAL
PUBLISHED MONTHLY,
BY W. B. SMITH & CO.
No. 58 Main street, Cincinnati, Ohio.

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Five copies, to one postoffice, one year, - 2,00
Ten copies, Do. Do. - - 3,00

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Name in the Sand.

Alone I walked on the ocean strand—
A pearly shell was in my hand!
I stooped and wrote upon the sand
My name, the year, the day;
As onward from the spot I passed,
One lingering look behind I cast—
A wave came rolling high and fast,
And washed my lines away.

And so, methought, 'twill quickly be
With every mark on earth with me!
A wave of dark oblivion's sea
Will sweep across the place
Where I have trod the sandy shore
Of time, and been, to be no more;
Of me, by day, the name I bore,
To leave no track or trace.

And yet, with Him who counts the sands,
And holds the water in His hands,
I know a lasting record stands
Inscribed against my name,
Of all this mortal part has wrought,
Of all this thinking soul has thought,
And from these fleeting moments caught,
For glory or for shame!

A New Theory of the Central Heat of the Earth, and of the Cause of Volcanic Phenomena.

The projection of matter in a fused state from the craters of volcanoes, and the emission of hot water from certain springs, led philosophers, in early times, to suppose that a high temperature prevailed in the lower regions of the earth. This has been latterly distinguished as the "central heat" of the globe. In later years this opinion has been strengthened by the rapid increase in temperature observed to be exhibited by the constituents of the earth's crust, as we descend from the superficial to the lower strata. This augmentation in temperature has been ascertained by thermometrical observations made in deep mines, wells, etc., to be such that, according to Cordier, it is not overstated at 1° F. for every 45 feet of depth.

This theory is evidently quite inconsistent with our present knowledge of the laws of liquefaction. For when a piece of solid matter is added to a portion of the same substance in a state of fusion, and at a temperature above its melting point, the solid if not too great in bulk, soon becomes liquified. Those, therefore, who contend that the central liquid is at a greatly higher temperature than the crust which incloses and is in physical contact with it, assert a condition of matters which all experience contradicts, and which is as inconceivable as that a crust of ice should form or remain on the surface of hot water, or a solid film of iron on the white-hot liquid metal.

This theory presupposes that the solid materials composing the crust are, as in the case of ice and water, specifically lighter than the liquid portion, and on the same principle that a cake of solid water can float on liquid water, so in regard to the earth, it is possible that the crust can float on the liquid mass. So far, accordingly, as central heat is concerned, this theory might be recognized. If, however, we look at what it can tell us regarding the density of the globe, we shall there find it at fault.

The density of the earth, as experimentally determined, is about five and a half times that of water. On comparing this with the superficial parts of the crust, we find that their density is only about one-half that of the entire earth. But if we take into consideration the augmentation in weight which substances at some depth must undergo, owing to the increased pressure towards the center, we are justified in asserting that the globe can not be, as is supposed by the advocates of the theory in question, a homogeneous liquid sphere, in physical contact with the crust which encloses it, for, if it were so, it would far exceed the determined density. It is requisite, on this riew, to assume that some powerful agent of expansion, such as heat, is at work counteracting the enormous pressure of the superincumbent mass, or that a space or spaces should be satisfactorily accounted for. The theory under discussion admits of neither of these alternatives. The liquid can not be raised in temperature without the crust becoming fused, and as for a space filled with vapor, this theory does not admit of one.

The view which I am about to propose is founded upon the assumption by matter when raised in temperature of the peculiar state distinguished as the spheroidal; and it will conduce to perspicuity, if I commence with a brief reference to the recent researches on this subject.

Few phenomena are more familiar than that of water, when placed at ordinary temperatures in a metallic or other vessel, wetting its surface and spreading over, and we are equally familiar with the effect of elevation of temperature in such circumstances, in dissipating the water in vapor. If, however, instead of raising the temperature of the vessel, after the addition of the water, the vessel be first raised to a temperature of not less than 340° Fahrenheit, and some water be then projected into it, the liquid does not, as might be expected, wet or spread over the vessel, and then pass into a state of violent ebullition, but, as it were, rolls itself up, and suddenly forms a globule or sphere, like a dew-drop, and moves about from side to side of the vessel which con-

tains it. The water in these circumstances is said to have assumed the spheroidal state.

Boutigny made similar observations upon many other liquids, as well as on various solids, and arrived in consequence at the following conclusions:

1st. That all bodies can pass into the spheroidal state.

2d. That the temperature of bodies in the spheroidal state, whatever be the temperature of the vessel which contains them, is invariably inferior to their point of ebullition.

3d. That there is no contact between bodies in the spheroidal state and the surfaces of the heated vessels on which they are placed.

4th. That bodies in the spheroidal state exhibit absolute reflection in regard to heat.

Thus much then premised, I shall now proceed to the more immediate object of this paper, viz.: the applications of the results of observations on bodies in the spheroidal state to the physical constitution of the globe.

I assume that our globe at the present time consists essentially of three distinct portions:

1st. A central nucleus in a state of igneous fusion.

2d. A crust at a comparatively low temperature, the inner side of which is in the spheroidal state.

3d. A space between the crust and the central nucleus, possibly filled with vaporized mineral matter.

The arrangement of these several portions, and their connection one with another, may be better understood by reference to the constitution of an *egg*, which bears a strong analogy to it in point of arrangement, though differing in shape. The yolk of the egg represents the mass of matter in a state of igneous fusion; the white of the egg, the space between the heated mass and the crust; and the shell of the egg, the crust of the globe.

There is one important feature which all bodies in the spheroidal state present, and which I wish to bring prominently forward. I refer to the remarkable property of total reflection of the heat incident upon them. The effect of this property must be to make the inner surface of the crust of the globe, (which, it will be remembered, is in the spheroidal state,) equivalent in every direction to an immense concave mirror, whose temperature will be very slightly affected by the heat which falls upon it. Such a condition of matter is manifestly compatible with the presence of a much higher temperature at the central nucleus than at the inner surface of the crust, and necessitates much slower cooling of that crust, and consequently of the nucleus which it robs of heat, than would be the case if the power to reflect heat were not characteristic of the spheroidal condition of matter. And seeing that at a certain though varying, distance from the surface of the earth, there is an invariable temperature in every latitude, the spheroidal condition of the inner surface of the crust must be considered paramount, so long as our present cosmical arrangements continue unchanged; for as the crust has long ceased to vary in temperature, except within a small distance from the surface, there is no force at work which can deprive the inner surface of the crust or the central nucleus of heat, and, therefore, none which can diminish their spheroidicity. They must be regarded as two surfaces constantly exchanging the same amount of heat, and prevented, in consequence, like two warm radiating bodies on Pictet's theory, from undergoing any change in temperature.

Such is the theory by which I seek to reconcile the co-existence in our globe of a central heat and fluidity, and a cold solid crust.

The harmony of this theory with the known density of the globe may now be advantageously alluded to.

In a former part of this paper I stated that, in order to reconcile the mean density of the globe with that of its constituents, it was requisite that some powerful expansive agent, or a space filled with vapor, should be accounted for, so as to lower the mean density of the earth.

In the spheroidal theory of the earth, there are two different ways by which the density may be lowered, 1st, by the dilatation of the central fluid consequent upon its high temperature; and, 2d, and more particularly, by the space which intervenes between the central nucleus and the external crust. The former, viz., the expansion of the materials in the liquid state, would go but a small way in lowering the globe's density; when, however, the space which this theory necessitates is taken into consideration, there is ample room afforded by which the density of the globe, as a whole, might be more or less lowered.

The other planets are probably in the same condition as the earth, in so far that each has a liquid central nucleus at a distance from the enclosing crust, and, in consequence, a lower density than it would have if solid to the center; but in our ignorance of the chemical composition of the central portions of our own globe, and of the entire mass of the other heavenly bodies, as well as of the temperature which characterizes their inner portions, we are without the data necessary for calculating what their specific gravity should be, to accord with the requirements of the Spheroidal Theory.

Internal heat and volcanic phenomena I ascribe to two different causes; and while I believe that chemical action is quite competent to account for volcanic phenomena, at the same time I conceive that the internal heat is not directly due to this force, but is the inevitable consequence of the matter composing the crust being at such a short distance from the central nucleus. In the spheroidal theory of the earth such an internal heat is fully accounted for, in the proximity of the crust to the central nucleus. But while the heat of the inner portion of the crust is attributable to the central nucleus, there is no physical contact, and therefore little or no possibility of fused matter being ejected from the central sphere through the crust.

Before proceeding further, I shall here make reference to an experiment, as the results which it gives appear to illustrate what occurs in volcanic phenomena.

If a shallow vessel of copper be raised to a temperature of about 400° F., and some drops of nitric acid be projected into it, the nitric acid, (like water placed in the same circumstances,) instantly assumes the spheroidal condition, and rolls about the capsule without any visible chemical action upon it. During the time that the nitric acid is in the spheroidal state, there seems to be a complete cessation of that violent chemical action which characterizes the meeting of nitric acid and copper at ordinary temperatures. The duration of the spheroid of nitric acid depends on two circumstances; first, that the heated vessel be directly kept at the required temperature by lamp or otherwise; and, secondly, that there be a moderate quantity of liquid. For, should the copper vessel be reduced in temperature, either directly, by withdrawing the source of heat, or indirectly, by adding more liquid than the heated vessel can possibly keep in the spheroidal state, the nitric acid will wet the surface of the copper, violent chemical action will be the consequence, and volumes of nitric oxide gas be given off. From the above experiment it would appear that—

1st. There is no chemical action between bodies in the spheroidal state and the hot surfaces over which they are placed.

2d. That chemical action instantly takes place when the vessel is directly reduced in temperature, or an overplus of liquid added; in other words, when physical contact is determined between the two bodies.

In applying the preceding experimental results to volcanic phenomena, I assume that there exist contiguous to the volcanoes of our globe, (either formed or in the act of formation,) basin-shaped cavities, more or less deeply seated, the under part of which is composed of metallic bodies at a high temperature. Water, either from lakes, etc., at the surface, or from subterranean reservoirs, finds access to one of these cavities. The first portion which descends instantly assumes the spheroidal condition—more water enters, and still it is spherodized—the stream continues, till, in course of time, an immense volume of water is there rolling and tossing about, but not yet touching the metallic surface; ultimately, however, the balance is overturned, the liquid touches the metallic basin. An immense volume of water is thereby quickly converted into steam, while at the same moment chemical action on a large scale speedily ensue

between the liquid and the metallic bodies — the latter action giving rise to heat quite sufficient to fuse large portions of mineral matter. The almost instantaneous generation of large volumes of vapors and gases, and these promptly augmented in bulk for some time, would soon produce a force quite able to raise large tracts of land, and, when a vent was made or obtained, would eject the fused mass as seen from the craters of some modern volcanoes during the term of an eruption.

Mutual Exercises.

It is a remark of an experienced teacher in another State, that no day should be allowed to pass without seeking to make the pulse of the whole school beat in unison. This remark seems founded in reason. No teacher can put it in practice without perceiving the force and propriety of it. Such exercises tend to create a general interest in the affairs of the school-room. They create a love for the school, for the fellow pupil, for the teacher. They appeal to the strong feeling of sympathy in our nature. It is natural for us to enter with interest into what we do in concert with many. Be it a religious service, it is a common remark that a full meeting is a good one; be it a parade day, the sight of a great throng will animate most men, and kindle the flame of glowing interest in what would soon tire, if viewed only by a few; be it a *mob* even, the dictates of reason, and the voice of conscience, and the sense of right, frequently will be hushed by the voice of the many, and the most timid will unresistingly follow "a multitude to do evil."

The teacher will wisely avail himself of this principle, and as often as he can make the voice of the whole school rise in concert in the strains of music, in the mutual reading of the sacred word, or of some secular lesson, or in some exercise prepared expressly for this purpose. As already remarked, no day should be allowed to pass without some exercise of this kind. Some teachers are fond of a mutual exercise as one method of teaching *reading;* but this seems to be as much recommended by the show and sound as by its utility. A few prominent voices will usually take the responsibility of leading from all the rest, and so, while the larger portion of the school are saved from the necessity of making much exertion, they make but little more progress in the art of reading than wire figures in the art of walking. But there may be a difference of opinion on this point. No person, however, can doubt the propriety of this exercise occasionally, as a method of making the great arteries of feeling in the school-room throb in unison.

We have witnessed the animating effect of this exercise upon the closing day of a term, when the room was filled with a dense and weary audience; the sense of relief was very perceptible, as with a low and sweet harmony of voices, the female portion of the school repeated some sweet hymn; or while, as with one voice, the pupils united in this simple exercise: The decimal expression for one-half is five-tenths; the decimal for one-third is three hundred and thirty-three thousandths and a remainder; the decimal for two-thirds, etc. It was like sweet music after a quarrel. And sometimes of a summer morning, when the sunbeams and the notes of birds and the fragrant wind have come in through the open windows to the school-room, and seemingly conspired to produce one delicious sensation, we remember having seen many of our pupils melted to tears by the recitation of these delightful words:

> "On Tabor's top the Saviour stands,
> His altered face resplendent shines," etc.

Here is abundant opportunity for the exercise of the ingenuity of the teacher. To-day let the whole company of pupils tell the wonders of the prism, and repeat the list of primary colors.— To-morrow let them unite in saying (what may be new to many of them) that—the 20th ult., or ultimo, signifies the 20th of the last month; the 20th inst., or instant, signifies the 20th of the present month; the 20th prox., or proximo, signifies the 20th of the next month. Now let them repeat a lesson learned of the book-maker—that, when the sheets of paper are folded into two leaves, the book is called a folio; when the sheets, etc. Again, the science of astronomy will send down a leaf for our use, and let all the school read from it—the members of the solar system are the sun, eight planets, twelve asteroids, twenty satellites,* and millions of comets. The names of the planets are, etc. This interesting exercise may be extended by repeating the names of the asteroids, the distance of the several planets, and the number of satellites attending each. Then, without any scalpel, or one drop of blood, anatomy will dissect the human frame before us, and report—that the whole number of bones in the human system is two hundred and eight; these are divided into the bones of the head, the bones of the trunk, etc. Geography will also send in a green and fragrant leaf, and suggest the names of the States of our Union. If the school consist of both sexes, let one repeat the State, while the other supplies the capital.— This study affords a great variety, states, capitals, countries, rivers and the like.

There is scarcely any end to the variety which may be employed. It may now be the books of the Old Testament, and then of the New; now the American Presidents, then the usual form of a promissory note; now it may be the list of English Sovereigns, then again an *order* on John Smith! to-day it may be the succession of the Popes; to-morrow the bones in the foot, the *tarsus, the metatarsus, and the phalanges;* now the signs of addition, subtraction, and the like; again, the signs of the Zodiac.

But teachers may inquire how they shall enable their pupils to acquaint themselves with these forms so as to repeat in concert; here it is not enough to know the *sense;* all must unite in the same form of words. We reply, that many of these forms can be learned from books already in the school room, as the books of the Bible, the Zodiacal Signs, and the like. For the rest, a piece of chalk on the black-board will suffice. But it has been our practice to write off many of these forms upon large sheets of paper, with brush and paint, (which any painter can furnish,) and then suspend these sheets for a time upon the walls, making a very appropriate "paper hanging" for a school-room. It would be very appropriate if we could either have books containing a great variety of these exercises, or large sheets with the same printed in mammoth type tor the use of schools. If suggestions are needed as to the matter or manner, we will venture to say they may be had by sending to the editor's office. What book-seller will show some signs of penitence, and disposition to atone for a a thousand *poor* school-books, by attempting such a project as this? We think that if repentance does not lead to the attempt, an expectation of profit might. Fellow-teachers, or at least those of you who can not sing in your school-rooms, will you not remember the subject of Mutual Exercises?—*Mass. Teacher.*

* The eighth satellite of Saturn has been recently discovered. Possibly Neptune has two; in which case the number is twenty-one.

Singular Geological Fact.

At Modena, in Italy, within a circle of four miles around the city, wherever the earth is dug, and the workmen arrive at the distance of sixty-three feet, they come to a bed of chalk, which they bore with an augur, five feet deep. They then withdraw from the pit before the augur is removed, and upon its extraction the water bursts up with great violence, and quickly fills the well thus made, the supply of water being affected neither by rains nor drouths. At the depth of fourteen feet, are found the ruins of an ancient city, houses, paved streets, and mosaic work.— Below this again is a layer of earth, and at 26 feet walnut trees are found entire, and with leaves and walnuts still found upon them. At 28 feet soft chalk is found, and below this vegebles and trees, as before.

☞ Gov. Wright, of Indiana, advocating the establishment of a common school system in that State, says: "If we do not pay for the education of the boy, we shall surely pay double for the ignorance of the man."

☞ Prentice says, "a Mr. Bently, indicted for severely wounding a stranger with an ax, alleging as a reason that he 'didn't know but he was a robber.' "He didn't know," added Prentice, "and so he axed him."

A traveler through a dusty road,
Strowed acorns on the lea,
And one took root and sprouted up,
And grew into a tree.
Love sought its shade at evening time,
To breathe its early vows,
And age was pleased, in heats of noon,
To bask beneath its boughs;
The dormouse loved its dangling twigs,
The birds sweet music bore;
It stood a glory in its place,
A blessing evermore!

A Boy.

A TRUTHFUL AND PRETTY SKETCH.

A boy is the spirit of mischief embodied: a perfect teetotum, spinning round like a jenny or tumbling heels over head. He must invariably go through the process of leaping over every chair in his reach, makes drumheads of the doors, turns the tin pans into symbals, take the best knives out to dig worms for bait and loses them, hunts up the molasses cask and leaves the molasses running, is boon companion to the sugar barrel, searches up all the pie and preserves left after supper and eats them, goes to the apples every hour, hides his old cap in order to wear his best one, cuts his boots accidentally if he wants a new pair, tears his clothes for fun, jumps into the puddles for fun, and for ditto tracks your carpets and cuts your furniture. He is romping, shouting, blustering, and in all but his best estate, a terrible torment, especially to his sisters! He don't pretend to much until he is twelve, then the rage for frock coats and high dickies commences. At fourteen he is too big to split wood or go after water, and at the time these interesting offices ought to be performed, contrives to be invisible, whether concealed in the garret with some old worm-eaten novel for a companion, ensconsed in the wood-shed trying to learn legerdemain tricks, or bound off on some expedition that turns out to be in most cases more deplorable than explorable, to coin a word; at fifteen he has tolerable experience of the world—but from fifteen to twenty, may we be clear from the track when he is in sight; he knows more than Washington and Ben Franklin together; in other words, he knows more than he will ever know again.

Just hail one of these young specimens "boy" at sixteen, and how wrathy he gets! If he does not answer you precisely as the little urchin did who angrily exclaimed, "don't call me boy, I've smoked these two years," he will give you a withering look that is meant to annihilate you, turn on his heel, and with a curl of the lip mutter disdainfully, "who do you call boy?" and O! the emphasis.

But, jesting aside—an honest, blunt, merry, mischievous boy is something to be proud of whether as brother or son; for in all his scrapes his good heart gets the better of him, and leads him soon to repentance, and be sure he will remember his fault at least five minutes.

A Great Man.

George Lippard, in his new work, called "Nazarine," thus speaks of President Jackson: "HE WAS A MAN! Well I remember the day I waited on him. He sat there in his arm chair; I can see the old warrior's face, with his snow-white hair, even now. We told him of the public distress, the manufactures ruined, the eagle shrouded in crape, which was borne at the head of 20,000 men into Independence Square. He heard us all. We begged him to leave the deposites where they were; to uphold the great bank in Philadelphia. Still he did not say a word. At last one of our members, more fiery than the rest, intimated that if the bank was crushed a rebellion might follow.

"The old man rose; I can see him yet.

"'Come,' he shouted, in a voice of thunder, as his clutched right hand was raised above his white hairs—'Come with bayonets in your hands, instead of petitions; surround the White House with your legions—I am ready for you all!—By the Eternal!—with the people at my back, whom your gold can neither buy nor awe—I will swing you up around the capital, (each rebel of you,) on a gibbet, high as Haman's.'

"When I think," says the author, "of that one man standing there at Washington, battling with all the powers of bank and panic combined, betrayed by those in whom he trusted, assailed by all that the snake of malice could hiss or the fiend of falsehood could howl—when I think of that one man placing his back against the rock, and folding his arms for the blow, while he uttered his awful vow, ('By the Eternal! I will not swerve one inch from the course I have chosen!),—I must confess that the records of ancient Greece and Rome—nay, the proudest days of Cromwell or Napoleon—can not furnish an instance of a will like that of Andrew Jackson, when he placed his life and soul and fame on the hazard of a die for the *people's welfare*."

Prof. Page's Electro Magnetic Locomotive.

A gentleman who was present, and one of those who went in the car on its trip, furnished to the Republic the annexed account of Professor Page's experiment on Tuesday last. The progress of the locomotive, when it started, was so slow that a boy was enabled to keep pace with it for several hundred feet. But the speed was soon increased, and Bladensburg, a distance of, we believe, about five miles and a quarter, was reached in thirty-nine minutes. When within two miles of that place, the power of the battery being fully up, the locomotive began to run, on nearly a level plane, at the rate of nineteen miles an hour, or seven miles faster than the greatest speed heretofore attained. This velocity was continued for a mile, when one of the cells cracked entirely open, which caused the acids to intermix; and, as a consequence, the propelling power was partially weakened. Two of the other cells subsequently met with a similar disaster.

The Professor proceeded cautiously, fearing obstructions in the way, such as the coming of cars in the opposite direction, and cattle on the road. Seven halts were made, occupying in all forty minutes. But, notwithstanding these hindrances and delays, the trip to and from Bladensburg was accomplished in one minute less than two hours.

The cells were made of light earthenware, for the purpose of the experiment merely, without reference to durability. This part of the apparatus can, therefore, be easily guarded against mishap.

The great point established was, that a locomotive, on the principle of Prof. Page, can be made to travel nineteen miles an hour.

Importance of Gutta Percha.

Of all modern discoveries, gutta percha deservedly stands in the front rank for its great utility. The public may not be aware of the progress made in the preparation and manufacture of this singular article. By different processes, it is made elastic like India-rubber, hard like marble, and fit to spread on cloth, thick or thin. A table slab has been made of it, and long used without injury, which possesses all the external qualities of polished marble. Race-horses are shod with it in England. An omnibus, we are assured, has been running in Philadelphia for a year or more with tires on its wheels made of gutta percha; and those best acquainted with its properties believe that in two years it will be adopted universally in this city for our public vehicles. If so, it will at least save our ears much noise.

Hold Him In!

An editor out West acknowledges the receipt of an heir—a fourteen pounder, and a boy at that. Somebody hold him! Hear how he splurges:

I am this day multiplied by two—I am a duplicate—I am number one of an indefinite series, and there is my continuation! And, you observe, it is not a block, nor a block-head, nor a painting, nor a bust, nor a fragment of anything, however beautiful, but a combination of all the arts and sciences in one—painting, sculpture, music: hear! hear him cry!—mineralogy, mechanics, see him kick!—geography and the use of the globes, see him at nurse!—and withal he is a perpetual motion—a time-piece that will never run down! And who wound him up?"

Where beauty without truth is seen,
It dazzles—not invites;
A modest, unassuming mien
Which in the truth delights,
Though perfect beauty may not shine,
Makes its possessor half divine.

The World's Fair.

The Commissioners have resolved that the exhibition shall positively open on the 1st of May. In relation to the American portion of the exhibition, we find the following in the London correspondence of the New York Commercial Advertiser:

"It has been feared by Americans here that the articles contributed by our citizens would not do us justice, as a nation. One can not yet tell what the comparative merit of our country will be, side by side, in the strife of the peaceful arts, with the old nations of the earth. But I feel sure that we shall not fall far behind. In many specimens of what will come under the head of "raw material," I have seen abundant evidence to-day that our show will be rich. Ores, timber, as samples of our woods; grains in the kernel, and ground into the whitest and finest of flour; Indian corn upon the ear, and in its various forms of samp, hominy, and meal; coal, iron, copper, cotton, such as the great market never received; rice in the ear, the kernel, and flour; tobacco, from the unpressed leaf to the most aromatic cigar, and many other things which occupy this classification, have been opened and examined to-day, greatly to our satisfaction. In machinery we shall not make a large display. Still, even here, we have much that is beautiful, and some that is not only new and ingenious, but upon which I should be willing to risk our reputation at the exhibition.

Our agricultural implements excite great attention. In plows, harrows, drills, threshers, reapers, and the like, we are in advance of whatever I have seen here yet from the continent or from England. We have on exhibition, also, many very beautiful and useful horticultural implements, which are new here. The Lawrence Mills have sent sheetings which will hardly be outdone by Manchester; and tweeds, coach-lace, ginghams, prints, and cassimeres have been placed upon our counters.

In nothing, however, do we excite so great surprise as in our India-rubber goods. This is a thing almost unknown in England—the convertibility of India-rubber into almost every conceivable thing on earth! "Good heavens! what is this?—and this?—and this?" were exclamations I constantly heard, as case after case of the almost infinite variety was opened. In daguerreotypes, throughout the whole art, we are far ahead. It has been wise thus to send the likeness of our great and good men. My friend, Governor Briggs, has had a crowd all day around his perfect and admirable likeness. Twelve hundred daguerreotypes, handsomely framed and hung judiciously, will not be the least attractive part of our exhibition; and I am told that there are arriving that number of individual portraits.

A correspondent of the Tribune, writing from London, says that the great trouble so far has been to keep the building from leaking. It is confidently asserted that the building, from the contraction and expansion of such an immense pile of glass, iron, wood, and putty, can not be rendered impervious to the rain, or safe from injury or breakage by the heat of the summer sun. If this be so, some waterproof covering will have to be adopted. The French, and other nations, are decorating their respective portions of space handsomely.

It is intended to lay down an electric telegraph round the building, with a dial-plate at each entrance, that due notice may be simultaneously communicated to every part of the edifice on the arrival of any known swindler or pickpocket, so that he may be closely watched; or to facilitate the recovery of any thing which may be stolen in the crowds that will be constantly passing and re-passing.

Every one in London seems to expect to make a fortune the coming season. The publicans, lodging-house keepers, omnibus and cab proprietors, are in a happy frame of mind; and shop-windows teem with exhibition-wares temptingly displayed, with prices pinned upon them.

The proceedings of the meeting of American contributors, which has already been referred to in the Sun, has been furnished by the Tribune's correspondent. Their grievances appear to be included in the following summary: that members of the juries for awarding premiums, twenty-one in number, apportioned to the United States, by a meeting of Foreign Commissioners, should be appointed by competent authority; the executive committee charging admission to exhibitors, unless they will enter under the badge of servitude; the unusual imposition of charges by the executive committee for general decorations; for banding, shafting, etc., necessary to the exhibition of working machines, and all other charges of which we have not been notified; the absence of protection against piracy to new inventions; the rejection of products of the United States by the executive committee, and the dwindling down of the four grand prizes of £5,000 to a distribution of bronze medals. An effort will be made to remove these causes of dissatisfaction, though the success attending it will be doubtful; they have arisen at exhibitions at home, as well as those abroad."

A letter dated London, March 28, to the Boston Post, represents that there is a rich confusion on the premises among American contributors, and adds:

"I have been present daily at the Industrial Palace since the 22d, and such a destruction as is here shown is frightful. The water, in the first place, is leaking down upon all kinds of goods, polished machinery, prints, and cases (supposed to contain valuable goods) not yet opened. A case, five feet long, three feet wide, containing a beautiful model of the Exchange in New York, plate glass front and mirror back, was completely demolished. The artist is a young man, now residing in New York; his mother and sister had obtained permission to see it opened, and when they beheld it a mass of ruins they wept bitterly. A case, marked Greenough, of Pa., containing an electrical machine, was entirely destroyed; and had it not been ruined before entering the building, it would have been by the bungling manner in which it was opened in my presence. A majority of the committee of American contributors being present, protested against any more packages being opened until some authorized agents were on the spot. Mr. Stansbury, who ought to have been attending to the duty he had usurped, was about being presented at court, Mr. Riddle not having arrived at that time.

"Many more cases are in the same condition of which I have spoken—so say the soldiers who have charge of taking them from the railroad-station to the place of opening. Whether these breakages were before they left home, on board the vessel, on the railroad, or on the way from the station to the building, you have means of knowing as well as I. Certain it is, there is wilful neglect somewhere. Mr. Stansbury, instead of remaining at Southampton until the goods were landed, and then accompanying them to the exhibition, as his appointment only provided, left the ship immediately on his arrival, for London, where he has been attending to every thing but his duty—preparing his court dress, hunting up Regent-street quarters at Regent-street prices—all to come out of the industrial classes of the United States, who, through the few who represent them here, have succeeded in nipping his operations in the bud. Rest assured, Mr. Riddle will do his duty to the letter, and will be supported by all Americans now here and those to come."

Gas from Water.

The Boston Times, of the 19th instant, says it is a fixed fact, that Rev. Henry W. Adams, of that city, has succeeded in converting water into light. It says:

"We entered the laboratory cavilers, ridiculing his theory; but after a most thorough and searching investigation, left perfectly satisfied that the long-sought problem had been solved. We could see no occasion to doubt, for the thing was demonstrated in our presence. The whole affair is based upon philosophical principles, and is destined vastly to extend the field of science. The process does not consist of one invention only, but a series of the most brilliant discoveries in the science of electricity, magnetism, and chemical affinity.

"What renders this most remarkable is, that the water, by a simple process, is decomposed into oxygen and hydrogen gas in great quantities, and the two gasses are so separated as to avoid all danger of explosion. Indeed, the hydrogen

is obtained in so pure a state that it may be used with entire safety.

"Mr. Adams has invented a mode of catalyzing the gas at any distance from the burner, and by this means produce the most intense and beautiful white light which the eye ever beheld. He has also invented a separate mode of increasing the heat of the hydrogen flame so much beyond the heat of any flame hitherto, as to be able to boil water, and generate steam for motive power without smoke or cinders, with great rapidity. The whole process is simple, cheap, practical and perfectly safe. Mr. Adams is a ripe scholar, an elegant writer, and has long been distinguished for research and practical knowledge as a chemist

"The whole series of inventions are characterized by originality, and are the result of extensive and long-protracted experiments. Mr. Adams informed us that he had discovered incontestible proof that hydrogen gas is a metal, that oxygen is combined with it as a base, and that water is, therefore, an oxyde of hydrogen."

A Thrilling Incident.

The following thrilling incident is extracted from a very interesting paper in Bently's Miscellany, entitled "Hours in Hindostan." The Cobra Capella is said to be one of the most venomous species of serpents in the East—its bite being attended with almost instant death.

We had been playing all the evening at whist. Our stake had been gold mohur points and twenty on the rubber. Maxey, who was always lucky, had won five consecutive bumpers, which lent a self-satisfied smile to his countenance, and made us, the losers, look anything but pleased, when he suddenly changed countenance, and hesitated to play; this the more surprised us, since he was one who seldom pondered, being so perfectly master of the game that he deemed long consideration superfluous.

"Play away, Maxey, what are you about?" impatiently demanded Churchill, one of the most impetuous youths that ever wore the uniform of the body-guard.

"Hush!" responded Maxey, in a tone which thrilled through us, at the same time turning deadly pale.

"Are you unwell?" said another, about to start up, for he believed our friend had suddenly taken ill.

"For the love of God sit quiet," rejoined the other, denoting extreme fear or pain, and he laid down his cards. "If you value my life, move not."

"What can he mean! has he taken leave of his senses?" demanded Churchill, appealing to myself.

"Don't start! don't move, I tell you!" in a sort of whisper I never can forget, uttered Maxey. "If you make any sudden motion, I am a dead man!"

We exchanged looks. He continued—

"Remain quiet, and all may yet be well. I have a cobra capella around my leg."

Our first impulse was to draw back our chairs; but an appealing look from the victim induced us to remain, although we were aware that should the reptile transfer but one fold, and attach himself to any other of the party, that individual might already be counted a dead man, so fatal is the bite of that dreadful monster.

Poor Maxey was dressed as many old residents still dress in India,—namely, breeches and silk stockings; he therefore, the more plainly felt every movement of the snake. His countenance assumed a livid hue; the words seemed to leave his mouth without the feature altering its position, so rigid was his look, so fearful was he lest the slightest muscular movement should alarm the serpent and hasten his dreadful bite.

We were in agony little less than his own during the scene.

"He is coiling round!" muttered Maxey; "I feel him cold—cold to my limb; and now he tightens! for the love of Heaven call for some milk! I dare not speak loud; let it be placed on the ground near me; let some be spilt on the floor."

Churchill cautiously gave the order, and a servant slipped out of the room.

"Don't stir, Northcote, you moved your head. By everything sacred I conjure you not to do so again! It can not be long ere my fate is decided. I have a wife and two children in Europe; tell them I died blessing them—that my last prayers were for them—the snake is winding itself round my calf—I leave them all I possess I can almost fancy I feel his breath. Great God! to die in such a manner!"

The milk was brought and carefully put down; a few drops were sprinkled on the floor, and the affrighted servants drew back.

Again Maxey spoke:

"No—it has no effect! On the contrary, he has clasped himself tighter—he has uncurled his upper fold. I dare not look down, but I am sure he is about to draw back to give the bite of death with more fatal precision. Receive me, O Lord! and pardon me—my last hour is come!. Again he pauses. I die firm, but this is past endurance—ah, no! he has undone another fold, and loosens himself. Can he be going to some one else?" We involuntary started. "For the love of Heaven, stir not! I am a dead man: but bear with me! He still loosens—he is about to dart! Move not, but beware! Churchill, he falls off that way. Oh! this agony is too hard to bear! Another pressure and I am dead! No! he relaxes!"

At that moment, poor Maxey ventured to look down; the snake had unwound himself, the last coil *had* fallen, and the reptile was making for the milk.

"I am saved! I am saved!" and Maxey bounded from his chair, and fell senseless into the arms of one of his servants. In another instant, need it be added, we were all dispersed—the snake was killed, and our poor friend carried more dead than alive to his room.

Barnum.

The editor of the Cleveland Plaindealer, who was in this city during the presence of Jenny Lind, gives the following description of Barnum:

I have spent the most of the morning with Barnum and his associates, and think I never saw so large a business so systematically conducted. He is the reigning prince; sits at his table in velvet slippers, genteel morning-gown, and blue velvet cap with a golden tassel; receives messages, messengers, and telegraphic despatches, from all parts of the city and country; talks, writes, and dictates to clerks the answering business, at the same time he entertains his friends with much useful information, and the best of jokes. The great secret of his success lies in his perfect knowledge of human nature, coupled with great boldness, energy and tact in adapting means to an end. He never reasons—conclusions are ever present with him. While another is *thinking*, he is *acting*, and when other showmen are calculating the gains, he is counting their dimes. It is astonishing to hear him talk. An operation with him that does not result in a profit of twenty, thirty, or fifty thousand dollars, is not worth the mentioning. His reputation for wealth and business-ability being world-wide, he is going into a mammoth banking and foreign agency business at Philadelphia. He sells "Iranistan," his beautiful country-seat at Bridgeport, Conn., which cost him over one hundred thousand dollars, *under the hammer*, if it does not fetch him a tenth of that sum. He sends the Bateman family, and a manager, to Europe, the first of June, to take charge of the show. He, in company with one or two others, fitted out a ship, last year, to go to the Island of Ceylon, in the Indian Ocean, and bring over a *cargo of elephants*. A recent telegraphic despatch from his agent at N. York, informs him that the elephants, thirty in number, have been shipped, and are on their way. He takes twelve of them, hitches them to an immense band-wagon, followed by Gen. Tom Thumb and suite, with lots of other unique and wonderful things, and starts a new show through the country, that is to eclipse all its predecessors in that line. He has on the way, if not already landed at the World's Fair, a ship load of curiosities from China, to be there exhibited and sold out by a Chinese family, which have been exhibiting in this country, and who are still in the employ of Barnum. He talks strongly of making investments in Cleveland, and has got a lawyer to investigate the late Free Banking Law of this State, and report to him the chances of a big haul under it.

Route from the Atlantic to the Pacific Ocean.

The Tehuantepec Route has always been considered one of the best of the various lines which Nature has prepared.

If, as is supposed, several places of transit will be necessary to accommodate the commerce of the Eastern world, Tehuantepec must be one of the greatest thoroughfares. A member of the commission, now on a reconnoisance of the Isthmus, writes to the New Orleans Picayune that Spanish and Mexican ignorance, prejudices, etc., are great obstacles in the way.

On reaching the head-waters of the Coatzacolcos river, the appearance of the country, broken into hills and valleys, and frequently covered for miles with a reeking mass of vegetation, seems scarcely to warrant the practicability of a railroad; nor is the first-sight impression changed, either from actual inquiry of the people themselves, or from a journey across the Isthmus by any of the existing means of travel: First, because at the north side the stolid ignorance of the inhabitants is an insurmountable bar to the smallest reliable information. The Indians scarcely know from what tribe they are descended, and each tribe is unable to speak any language but their own, and if we add to this fact, that there are upwards of twenty different dialects on the Isthmus, all separate and distinct, the effects are obvious Second, all the roads leading from the Gulf of Mexico to Tehuantepec cross over the tallest ridges of the great chain which separates the Atlantic and Pacific Oceans —roads which are known to bear date beyond even the time of the conquest itself. Under these circumstances, even the man of science himself may be deceived in regard to the formation of the country, and it is only when the instruments of his profession are brought to bear, and when reconnoisances have been made through sections hitherto untrodden, and almost unknown, that the possibility of a railroad presents itself.

It is true that "surveys" have been made, and that the feasibility of the route has long since been published to the world, but when it becomes known that these *ci-devant* are in reality no surveys at all; when, indeed, even villages and mountains, and even rivers are placed miles out of their true position; and, furthermore, when that same "scientific corps" are known to be nothing more nor less than a set of speculators, engaged in chopping mahogany, their charts are of little value, and serve merely as quicksands and decoy-beacons to misguide the real man of science. But a man must come here to find out these things, and then he is lucky if he falls not into the trap.

Another consideration must not be overlooked —a consideration which will account for all the opposition to the Tehuantepec treaty in the city of Mexico, and elsewhere, which will account for the misguided comments of the Mexican press, and for every false report and rumor which has risen hydra-like in opposition to the enterprise: I mean the old Spanish prejudices which manifest themselves everywhere over the Isthmus, the same old prejudices which retained all the old and unjust provisions of the Spanish code, which instituted the system of peonage, which kept up and fostered a corrupt and rotten priesthood, which opposes every enterprise, and which, in a word, makes Mexico what she is, a beggar among the nations of the earth. Nor should it be forgotten that while these prejudices are confined to a certain class, it is unfortunately the class who possess all the knowledge and all the wealth. If an American presents himself, whether in the character of an adventurer or a man of science, he is regarded with suspicion; and if he seeks in either case for information (from the only source from which it can be obtained here) he is sure to be deceived in the matter of truth, or turned away as blindly as he came.

If, then, unsatisfactory and despairing reports have reached our friends in the United States, it is for these reasons, and these alone. As I before remarked, it is only by rejecting all such sources of information, by turning off from the steep and giddy mule tracks, and placing the country under the level and transit, and the bays and rivers under the lead-line and sextant, that first impressions are dispelled. But it requires time and means to do these things; and now that they are prosecuted with energy and the spirit to overcome all difficulties, the question of the practicability of a railroad vanishes with each day's work.

On every side the riches of the country manifest themselves, and inspire us with the unfailing certainty of the project. Even independent of a communication with the navigation of the Pacific, there are resources sufficient within the lands of the grant to build and maintain the proposed road. But this establishment of a port on the coast is now no longer a matter of doubt, and a few weeks longer will determine whether Ventosa or Salina Cruz will be selected. In regard to the railroad, on the other hand, the survey of the Mashua pass has demonstrated the perfect practicability of its construction at a grade of less than sixty feet to the mile. Surely, these things can not fail to exceed even the most sanguine expectations of the friends of the enterprise. But they have not been found without a corresponding deal of labor and difficulty—nor without the expense of human life, and weeks of bodily and mental exertion. I know not what reports have reached the company in regard to the route; but certain it is if they were deemed at the time unfavorable, they are due solely to the numerous causes to which I have referred. I have long felt the desire to communicate these things, but until this, no convenient opportunity has offered itself, nor did I feel myself justifiable until I had crossed the Isthmus, and realized what I have written.

If there is anything in the manners of modern society that is truly offensive to our ideas of delicacy, it is the vulgar commonness to which kissing has been degraded. As to the shaking of hands—that, though we would not have it too indiscriminately practiced, it is a matter of comparatively little moment; but the pressure of the lips—should be an interchange of affectionate greetings, or tender farewell, sacred to the dearest connexions. Our parents—our sisters—our wife—our loved one, ready to become our wife—our bosom's intimate, the friend of our heart's core—to them, and to them only, it has been truly said, should be consecrated the lips of delicacy.

The New York Dandy Daguerreotyped. —A writer in the Courier des Etats Unis has anatomized the New York dandy in a style which loses nothing of its pungency in passing into English through Willis' pen:

The toilette of the New York dandy is described by Mons. Lacombe as truly irreproachable. His pantaloons are so diligently renewed that the knee marks never protuberate. His gloves look like primroses newly-blown with thumb and fingers. His head, smooth from the curling tongs, sits in his collar like a marigold in a paper holder. The tie of his cravat, so broad and so long, is a marvel of untumbled dexterity. With his hat at the angle agreed upon, his set, booted like the model foot in the show case of the maker, laced, and with a violet in his button hole, he walks Broadway like a machine moved by a single action, and, if he looks at you at all, does it with an expression of "Vulgarian, keep on the other side of the walk." ("*Prends le bas du pave manant!*")

At his Club, at the Opera, at balls, and in Broadway, the New York dandy is pacha. He is not, in fact, a dangerous member of society—the "business" fathers and husbands of N. York have ciphered up the fact that "appearances" content him. Some intelligence, and certain powers of conversation are necessary, in fact, to keep up the illusions that are risky to those who "at least will flirt;" but the intelligence and conversation of the Fifth-pave-noodle are confined to topics soon exhausted. He knows that Cellarius invented the polka, and that Saraco is his prophet—that Derby and Coraz cut a coat authentically—that Montel, Taylor & Lenoir make bouquets, and that Asia Minor and East Broadway are portions of the planet we live on; but other knowledge comes by accident, if at all, and is left to bald heads, and those who are willing to be bored with it.

☞ The greatest pleasure of life is love; the greatest treasure, contentment; the greatest possession, health; the greatest ease, sleep; and the best medicine, a true friend.

THE SCHOOL FRIEND,
AND OHIO SCHOOL JOURNAL.

CINCINNATI, JUNE 1, 1851.

Hints and Suggestions.

Scholars should be accustomed to study their *reading* lessons as much as any other: a time should be set apart for this purpose, and each class be required to devote the time to this employment. To determine whether this duty has been properly done, one of the best ways is for the teacher to be thoroughly acquainted with the lesson, and propose the questions in regard to its contents and sentiments, the meaning of words, etc., after the scholars have taken their places, but *before* they open their books to read.

The practice of committing short and spirited pieces for rehearsal or declamation will be found to aid scholars much, in their efforts to improve in reading.

Teachers should pay special attention to the *position* of scholars while in school, whether engaged in study or recitation; but especially when reading or reciting. Proper attention to this subject, accompanied by such instruction in physiology as every teacher should give, would secure for the children in all our schools a habit of sitting and walking as erectly and gracefully as the cadets at West Point; and we might hope that the race of stoop-shouldered men and women, with consumptive chests and cadaverous countenances, would soon be greatly diminished, if not annihilated.

As warm weather comes on, teachers should use great care to secure a thorough ventilation of their rooms. Throw open the door, let down the upper sash of the windows, if there are not other and adequate means for securing it. Do not suppose that this matter will take care of itself It must be seen to. Much of the uneasiness of scholars, and very much of the lassitude and weariness of teachers, of the headache and confusion of mind of which they complain, arises from breathing impure air.

Do not neglect singing. If interest flags and the school becomes noisy, let the scholars rise and sing a cheerful song. Give them some calisthenic exercises, motions for the hands and arms, specimens of the gestures appropriate in the delivery of some animated speech. You will find something of this kind far better than scolding.

In primary schools, the several columns of the multiplication table may, now and then, be recited by a class, or by the school in concert, backward and forward. The teacher may ask questions promiscuously to individuals, or he may arrange those who are learning it, as a class on the floor, and question them on it promiscuously, allowing those who answer correctly, "to go above those who miss," if he thinks proper. This exercise may be varied in several ways; the scholars may be permitted to question each other in turn, or the one at the foot of the class may be allowed to propose a question to any scholar in the class, and if the scholar fails, and the one who proposed it answers it correctly, let them change places in the class. These methods have been found to awaken a deep interest in the exercise.

It is well to have scholars write on slates a part of the time, instead of using pen and paper. They may imitate a copy written by the teacher on the blackboard, or write down in their own language facts or information communicated by the teacher.

To prevent scholars from putting pens into their mouths, for the purpose of cleaning them, a teacher once stated in our hearing that he had found no method succeed better than to drop into each of the inkstands a little of the water in which a dead rat or mouse had been soaked.

When his scholars, having tried repeatedly to solve a difficult question in arithmetic, without success, called upon him for assistance, a teacher of our acquaintance used to say to them pleasantly, "Have you tried it faithfully?" "Have you gone just as far as you can?" "Have you come to a full stop?" "Well, do you not know what the spelling-book directs you to do when you come to a full stop?" "No, sir." "Why, count six and go on." This, or some other pleasant remark, would generally so change the current of the scholar's thoughts, relieve his weariness, and quicken his perceptions, that he would be able to discover his mistake and surmount the difficulty without assistance.

An Exercise in Natural Philosophy.

This study, if properly conducted, is one of the most interesting and valuable which can occupy the mind of an immortal being. Multitudes, however, every year skim over this subject, with scarcely a single clearly-defined, well-apprehended idea of the wonderful principles they attempt to investigate. They study philosophy, but it is like dreaming awake. The eye may glance over the printed page, the memory may yield up the lesson either by answers to questions, or by verbatim recitation, but, in nine cases out of ten, the great truths which philosophy should teach never gain any lodgment in the intellect. As generally studied, this branch of science is a godless thing. Although it is most admirably calculated to bring down upon the mind the irresistible conviction that an omnipotent Being exerts his limitless power and wisdom in the creations around us, his hand is scarcely ever recognized; and the pupil advances through the study without the least suspicion that a creative Being ever had any connection with the laws of philosophy. Much less does he dream that every single law which he studies, every single force which he investigates, is so linked with his own existence, and the existence of the whole animal and vegetable world, that to destroy or change any one of them, would endanger the whole race of beings on our planet.

There is one direction which, in our opinion, ought to be given to the mind of every pupil studying this, or, indeed, any other kindred branch of knowledge. Our earth, constituted, as it is, of elementary atoms of various kinds, each endued with peculiar properties, governed by various forces which act in modes peculiar to themselves, was made for *some great purpose*. Each atom, with its accompanying properties and qualities, is a finger-print of the Creator. Design is too plainly written on all the earth to be for a moment overlooked. In giving instruction ourselves, we have endeavored to give our pupils a higher view of philosophy than a mere scientific one. We have tried to induce them to take such a view of the laws and forces which prevail on our planet, as, in part, the original Architect might have taken. Taking it for granted that the phenomena of the various forces were but the exhibitions of design, we have constantly endeavored to make some approach to the knowledge of that design. The earth, with all its concomitants, was not necessarily constituted as it is. If any peculiar forces or laws exist, the question may properly be asked, "Why do they exist?" The purposes for which matter was placed under the conditions we now see surrounding it, may, in many cases, perhaps, be ascertained, by considering *that all the proper uses which a thing subserves, constitute the reason why it was made as it is.*

Thus, the pupil is told that terrestrial gravity is that force by which all bodies are drawn to the center of the earth. After establishing in his mind, by experiment and observation, the undoubted fact that such a force actually exists, the teacher may well ask, "What designs are accomplished by giving such a force to matter?" The immediate design seems to be discovered when we have ascertained the *purposes* which it *actually subserves*. The gravitation force lodged in the sun holds the earth at a proper distance from it, in spite of the incalculable force with which it tends to fly away from the sun, *thus securing a requisite amount of caloric, and continuing the proper change of seasons.* This force seems to have been the *means* which the Creator made use of to secure these two most important conditions. The force of gravity lodged in the earth, binds the integrant particles of matter together, thus making it a fit habitation for animated existences. This force is the solidity of the earth. It does much more than simply bind particles together in a state of rest. On account of the daily revolution of the earth on its axis, all bodies on its surface are forced off into space with a force and velocity absolutely amazing. Mountains, oceans, rivers, cities, forests, human beings, etc., are forced off into space with a rapidity fifty times as great as that of the most rapid steam car, and with a power in comparison with which any mere human force is infinitely small. Gravity opposes this tremendous centrifugal power, and enables all movable bodies on the surface of the earth to remain in quietness. The subtle atmosphere, though its particles are self-repellant, and so light that any small disturbing force would seem sufficient to take it away from our planet, is yet bound to us by a subtle, unseen force, so strong and all-pervading that since the creation, probably not one atom has been taken away from the earth. It was necessary that the atmosphere should be kept around us all, and gravity was appointed its keeper. This force holds the moon in its orbit, thus controlling the tides in the ocean of water and the tides in the ocean of air: it causes all the surplus waters to flow into the seas: it causes the the rains to fall from the sky: it determines the growth of every plant, and fixes a limit to size of the larger animals on the land: it determines the force of all winds: it is the force which is instrumental in setting all water-wheels in motion; in keeping our clocks in motion: it determines our standard measure of length: it influences the amount of moisture carried up from the surface of land and sea; and in a thousand other ways shows its direct and important agency in all the operations of our world. To see how necessary this single force is to our well-being and existence, even, it is needful to suppose the earth deprived of it. Interrupt the force which binds the earth to the sun, and leave every thing else as it now is, and this planet would slide away into the unexplored regions of space, annihilating day and night, and the seasons of the year, and cutting us off from the great fountain of heat and light. If we suppose all things on the surface of the earth not solidified with it, to be deprived of this force, every loose thing on the crust of the globe—human beings, atmosphere, all waters, all animals, etc., would be hurled into space with inconceivable velocity. Suppose all the atoms which compose the body of the earth to be deprived of this power, and this solid sphere would crumble into dust far finer than the finest particles ever borne on the wings of a zephyr; old chaos and ever-during night would again resume sway. Thus we see how important is this solitary power, and from the manifold purposes of beneficent design which we see it constantly accomplishing, we may fairly infer the great ultimate reason in thus subjecting matter to such a control.

Time for Remodeling.

The great favor with which the Union School System has been received throughout the East and West, and the increased advantages for disposing of educational matters, which it presents, naturally bring to view some questions, which, under the old system would not probably have been thought of. The Union System, however, is little more than an improvement in the form of schools. It enables us to accomplish the old tasks much better, with much less expense of time and money.

Our present question is, "Whether some more important, more radical improvement can not also be made?" The general apathy on the subject of education, which seems to prevail within this State, very properly suggests an inquiry in regard to the quality of the articles to which we as teachers, so much desire to turn the attention of the community. We fret and foam, and are astonished and dumbfounded, because people will be so stupid and willfully blind, as not to put forth all their energies to secure to their children the benefits of an education, while, at the same time, we, as teachers, (I mean the teachers of the State) present to them an educational commodity, which is not worth one half the money and labor necessary to acquire it. As a general thing we incline to think that the estimate which the public really put upon anything, is not far from its true value. If they do not appreciate the numberless blessings of an education, it is, in all probability, because all the school education they have ever come in contact with, either in themselves or others, is destitute of the numberless blessings.

Virtues and supernatural powers are ascribed to education, such as the wild superstition of ancient times, loved to associate with the plants of Paradise, or potions concocted by spirits of a higher sphere.

How often are we told, that to cure the ills of State, and bring about a pretty fair sample of perfect happiness on earth, it is only needful to infuse new strength with our school operations; that the great ultimatum of human effort should be to turn the vital energies of the

State in the channel of the schools. That the active forces of this State have not been coursing along the channels of the educational garden, should, perhaps, be taken as a silent but stern assertion, that the educational channels have not been fit to receive them. The apathy which certainly has pervaded the State to the outermost limits, should read to those who have assumed the great responsibility of conducting public instruction, a homily bitter and humiliating.

It will not injure the teachers of our State to stop once in a while, and ask themselves the sober question, What substantial benefits are my pupils deriving from my labors? If teachers do not ask the question, parents do, and woe to that teacher and the cause of education in his neighborhood, where the answer is given in growls of discontent, or freezing neglect of the opportunities of knowledge. Parents do ask what good it is going to do their children to attend school, month after month, and however thoughtless we as teachers may be in hiding our heads to avoid a reply, no superficial answer will drive the anxious thought away. What solid valuable attainments are the pupils acquiring? What future good are they going to realize from the labors and privations of to-day? Are they going to receive any valuable return from the valuable moments which they are now spending?

We do not desire to be ultra in urging questions of this kind, but we are willing to state our firm conviction, that they should be put by every teacher to himself and should not be dismissed until they have received a specific answer. The greatest question of modern times is, *cui bono*? This question has been the great leader of civilization, from the time of Francis Bacon, to the present hour; Fulton worked out an answer in making a steam engine, and Morse in establishing a telegraph, and now the teacher should answer, in his school room, in every recitation, and every exercise over which he presides. We are not at any loss in regard to the means of answering it. Our own life and that of others around us, who, a little while ago, were in the school room, afford us every facility we can desire. How much of what is now being acquired in the school room, will, in all probability, come into every day practical use, when the pupils have become men? how much of it is now actually used by men, in their daily life?

If teachers will think for a moment, they will perceive that the present routine of study in most schools, is the old routine. In many respects it should be the same. In some, it should not. It should be changed to meet the exigencies of the times. We shall not hesitate to put the interrogatory in regard to what are considered the most sacred departments. For what purpose is a pupil taught to read? And to what extent should the common exercises of reading be carried in the school room? Now, however valuable the art of reading may be to the mass of pupils, we do not hesitate to affirm, that a great deal of time is worse than thrown away, because teachers do not clearly perceive the exact point of excellence, to which all the circumstances of the pupil render it proper for them to try to elevate him. Up to a certain degree of excellence in reading, the teacher properly expends his labors in striving to raise his scholars, but when the art of reading has degenerated from a valuable means into a luxurious and mere accomplishment, in which a favored few alone can hope to excel; it has passed beyond the wants of the great mass, and the time and labor employed in following it, are grossly misapplied. Too many other things of higher practical importance demand attention. Reading in schools does not store the mind with knowledge. It is a mere outlet, and too many teachers strive to make an outlet for knowledge before there is any knowledge to be let out. How far do the circumstances of the present life render it expedient and profitable to push the exercise of reading? We may put the same inquiry in regard to each of the other branches commonly pursued in schools. How much should we study grammar? The most that this study can do for Americans, is, simply, to correct a few of the errors of our written and oral language. We do not learn to speak the English language from any English Grammar. We learn our language from our parents, our playmates and the newspapers; and grammatical students are exceedingly fortunate, if their books do even so much as to correct the comparatively limited number of errors which have crept into their conversation. What is the use of studying Grammar? He who can not answer the question is not fit to teach it. He *can not* teach it with profit to himself, or his pupil. What are the items of use, written out in black and numbered?

Teachers' Institutes.

From a private letter from Mr. Lorin Andrews, the Chairman of the Executive Committee of the State Teachers' Association, we learn that he has already attended six Institutes, in which he has met and instructed more than three hundred teachers, beside addressing in every place large numbers of citizens who attended the evening sessions. More than twelve hundred teachers have been assembled in the institutes attended thus far this spring. Mr. Andrews is unquestionably doing a great and a good work in the cause of popular education; and it is gratifying to find the press, in the places he has visited, speaking out so decidedly in favor of his efforts.

The following notice of the Institute held in Mansfield, in which he was assisted by Mr. John Ogden, teacher of one of the public schools in Columbus, is from the Mansfield Herald:

"TEACHERS INSTITUTE.—This Institute was held during the last week, and was the second one ever held in this county. The attendance of teachers was not so large as we anticipated Only about sixty, of the two hundred and sixty teachers of the county were present. It was, however, a rich feast, and those who attended will never have cause to regret that their time was not well spent. Nothing transpired during the session to disturb its harmony, and every thing passed off pleasantly.

"The lectures of Messrs. Andrews and Ogden, on the various branches of common school education, were delivered in a clear, practical, and agreeable manner. Every teacher in the county would have been greatly benefitted, and better prepared to discharge their responsible duties as *teachers*, if they had been present. The evening lectures were very valuable. Questions of vital importance to every teacher were discussed—just such instruction was imparted as every one should be in possession of.

Prof. Andrews is eminently qualified for the field he now occupies. The object of his mission is to present the claims of general education upon the patriotism, morality, and Christianity of the people. His addresses leave an impression that must tell in behalf of the cause of popular instruction. We hope he may receive the hearty co-operation of the friends of education throughout the State."

Maumee City Union School.

Having made the acquaintance of Mr. M. A. Page, the efficient principal of this school, at the annual meeting of the State Teachers' Association, and learned from those who have long known him, something of his energy of character, we are not disappointed in learning that his worth and the value of his services are highly appreciated both by his employers and his associates. The following notice of his school is copied from the Maumee River Times, of April 10th:

"This school, after a vacation of some five weeks, will commence again, we understand, under the same instructors; at any rate, our citizens value the services of Mr. Page, the Principal, and his assistants, too highly, not to re-engage them, if they can be retained in the stations which they have so well filled to the satisfaction of the public.

"Those of our citizens who were present in Mr. Page's room, on Friday afternoon last, during the closing exercises, (of the quarter,) and we were glad to see so respectable an attendance, we think with us will say, that they were happily surprised to find an excellence of attainment acquired in this school, not only in composition, but in the art of declamation, and the other branches taught. The articles read from the "Dew-Drop," and "Sunbeam," reflected great credit not only upon the authors, but upon the school; many of them, indeed, would not discredit the pages of any literary magazine. Our citizens may well take pride in sustaining this school, under its present competent board of instructors.

"At the close of the exercises, the occasion was rendered quite impressive, by the presentation to the Principal, on the part of his assistants, of a very nicely-bound copy of the Bible, which was presented by Miss Drummond, in a few very appropriate remarks, in relation to the gift, and the responsible relations sustained by Principal and assistants, as public instructors, which mark of appreciation was very happily acknowledged by the Principal, although he had not before been apprized of any such manifestation of confidence in him being intended by his assistants."

Montgomery County Teachers' Association.

Messrs. EDITORS: You will confer a favor upon the members of the Montgomery County Teacher's Association, by publishing the following proceedings of a Teacher's Institute, held in the city of Dayton, commencing on Monday, March 31st, 1851.

There were present 56 teachers, during the session of the Institute.

Instruction was given in the branches taught in our Common Schools, by the following teachers, viz:

Grammar—James Campbell, and A. E. Stevens.
Written Arithmetic—E. E. Barney.
Mental " Charles Rogers.
Geography—W. N. Edwards, W. F. Doggett.
Penmanship—S. B. Barnaby.
Reading—A. M. Scott.

The session of the Institute continued for one week, and lectures were delivered during the evenings by the following gentlemen, viz: Messrs. William Denton, E. E. Barney, A. M. Scott, W. F. Doggett and W. N. Edwards.

Perfect harmony and good will prevailed during the session, and at its close a unanimous expression of satisfaction and approbation was made by those who were present. Judging from the zeal, energy and talent manifested by the teachers attending the Institute, we feel justified in saying that the cause of Education is rapidly advancing in our County.

At the closing of the Institute, the following resolution was unanimously adopted:

Resolved, That the Secretary of the Montgomery Co. Teachers' Association be requested to prepare a brief summary of the proceedings of the Institute, and forward the same for publication to the "Ohio Teacher," and "School Friend."

D. P. NEAD, *Secretary*.

CHARDON, May 6th, 1851.

FRIEND EDITORS: "Old Geauga" is yet ahead, on Teacher's Institutes, of any county in the State. We challenge any county in the State to present so great a number in attendance at a Spring Institute. We had 150 in attendance—100 ladies, 50 gentlemen.

This I think speaks well for the educational interests of "Old Geauga.'

I send you a synopsis of our Institute, which I would like to have you publish in the next number of your paper. I wish you would send me three or four copies of it. Yours, in great haste,

F. J. THOMAS.

Our friend Thomas, the Secretary of the meetings, has sent us a full synopsis of the proceedings of the above Institute, but it is too long for our paper. We now have matter of this kind for two or three pages. The Institute continued its session one week. We notice among its teachers some of the best teachers in Ohio. The exercises were conducted with great interest and spirit.

It was resolved—

That teachers should inculcate the principles of temperance upon the minds of their pupils.

That we earnestly recommend County Superintendency.

That the labors of female teachers are as salutary as those of male teachers, and should be equally recompensed.

That parents should visit the schools their children attend.

That pupils should be furnished with a standard work on penmanship.

That Rice's & Spencer's System of Penmanship is the best ever given to the American public.

That vocal music should be taught in all our schools.

That Physiology should be studied in the Common schools.

That the Holy Scriptures should be read daily.

That our teachers, and the various committees, have secured our highest esteem and regard.

On the evening of the close, the teachers and friends met together, and had a grand social meeting. "It was a glorious time for the teachers of Geauga."

Ohio State Teachers' Association.

The Ohio State Teachers' Association will hold its third semi-annual meeting in Cleveland on Wednesday and Thursday, the 2d and 3d days of July next. An introductory address will be delivered by the President of the Association on Wednesday morning, and Mr. H. H. Barney, of the Cincinnati High School, is the orator elect for Wednesday evening.

The following subjects, with others, will be presented for discussion: Free Schools, Normal Schools, and the commingling of the sexes in the same school room.

Female teachers will be entertained without charge, by reporting themselves at the book store of SMITH, KNIGHT & CO., or of M. C. YOUNGLOVE & CO.

Arrangements will be made with the various Rail Road Companies in the State, to carry delegates to and from the meeting at half the usual fare. Teachers and friends of Education are earnestly invited to attend.

Editors will confer a favor by giving this notice general circulation.

LORIN ANDREWS,
Chairman Executive Committee.

☞ The following question is submitted as worthy of some consideration:

Resolved, That the doctrine, *that the property of a state should educate its children*, is entirely in accordance with the principles of our republican institutions, and the only basis sufficiently wide and strong for the complete development of our educational destiny; and that to repudiate it, is to maintain principles subversive of the great principles which constitute the foundation of our individual prosperity and national glory.

Educational Movements in Massachusetts.

We are happy to record one of the most important educational movements in the city of Boston, which has taken place for a long time. On the 11th of March last, the School Board adopted a resolution requesting the City Council to make an appropriation of $2500 as a salary for one year, of a Superintendent of the Public Schools. To this request the City Council promptly and *unanimously* acceded. In conformity with the intention of this request, the Grammar School Committee introduced a resolution to meet on the 13th of May, for the purpose of choosing a Superintendent, and prescribing his duties. Mr. Bigelow, the Mayor of the City, presided. The resolution and report of the Committee excited considerable debate, but "after a full, interesting and animated discussion upon the effect of the establishment of the office of Superintendent of Schools," the report and resolutions were adopted by 17 in the affirmative, to 6 in the negative. The Grammar School Committee elect the Superintendent, and have thus defined his duties:

1. He shall examine the Public Schools, and, semi-annually, shall present a report to the Board, of their condition, and shall suggest by what measures their efficiency and usefulness may be increased, and whether by any means the expenses of our school system can be diminished without prejudice to its interests.

2. He shall at all times render such aid and communicate such information to the Sub-Committees as they may require of him; and he shall also assist in the manual examination in such manner as shall be desired by the annual Examining Committee.

3. He shall devote himself to the study of our School System, and of the condition of the Schools, and shall keep himself acquainted with the progress of instruction and discipline in other places, in order to suggest appropriate means for the advancement of the Public Schools in this city.

4. He shall make investigations as to the number and the condition of the children of the city, who are not receiving the benefits offered by the Public Schools, and, so far as is practicable, shall find out the reasons and suggest the remedies.

5. He shall consult with the different bodies, who have control in the building and altering of school-houses, and with all those through whom, either directly or indirectly, the school money is expended, that there may result more uniformity in their plans, and more economy in their expenditures.

6. He shall perform such other duties as the School Committee shall prescribe, or from time to time direct.

BOOK NOTICES.

COMPREHENSIVE SUMMARY OF UNIVERSAL HISTORY; With a Biography of Distinguished Persons, from the Earliest Period to the Present Time; To which is appended an Epitome of Heathen Mythology, Natural Philosophy, General Astronomy and Physiology: Adapted to American Schools, and General Readers. By Richmal Mangnall. For sale by D. Anderson, No. 34, 4th St., Cincinnati.

This book is about the size of Goodrich's Pictorial History, and contains 332 pages. It presents, in succession, a brief view of the principal personages and events in Grecian History, Roman History, English History, Irish History, French History, and General History. We have a succinct synopsis of American History, together with the Declaration of Independence and the Constitution of the United States of America. Then follows a chapter on British Biography, and one on American Biography, including a list of the Female Poets of America, and a summary of the principal events from the discovery of America to 1845. Then follows a general Biography of eminent persons, and a dictionary of Heathen Mythology, succeeded by a brief abstract of the principal branches of Natural Philosophy, Astronomy, General Philosophy, Anatomy and Physiology. The work is copiously interspersed with questions. We have never seen so much of all kinds of knowledge crowded into so small space as in this book. It is admirably adapted to aid a large class of youths in our schools, and especially of those individuals whose means will not allow them the privileges of a library. Great simplicity and conciseness are shown in its compilation. Among the testimonials affixed, we notice a large number of the names of the best teachers of our country, as well as many of our men of high literary rank.

REPORT ON THE AMERICAN SYSTEM OF GRADED FREE SCHOOLS to the Board of Trustees and Visitors of Common Schools, Cincinnati. By H. H. Barney, Principal of the Central School. Printed by order of the Board.

The above is the title of an exceedingly valuable pamphlet, containing 72 pages. In a new and condensed form, it discusses the present position and merits of the present system of education, which appears to be developing itself in the more educational portions of the United States. The Report discusses the present existence of the Union, or Free Graded Schools, in the several departments of Primary Schools, Secondary or Intermediate Schools, Grammar Schools, and Central High Schools. The author points out the origin, design and advantages of this system, and considers at some length the evils of the old *District* system, and points out how the *new* system affords a remedy. To every individual, at all interested in the educational movements of our day, this document can not but be of great value.

☞ The property of Boston, (Mass.,) is returned at $214,000,000; of Philadelphia, at $137,000,000; of New York, at $286,000,000. The population of Boston is $140,000; of Philadelphia, 410,000; of New York, 515,000. Each Bostonian is worth $1500; each Philadelphian, $333; each New Yorker, $556.

The Daily Revolution of the Earth Rendered Visible.

Many paragraphs are going the rounds of the papers to the effect, that the motion of our planet, on its axis, has been made apparent by an experiment now being made at Paris. The experiment is simply this: An iron ball is suspended by a fine wire, from the lofty dome of the Pantheon, and made to swing across a circular table placed beneath it. Now, by actual trial it is found that the line described by the ball in passing across the table, is continually changing its direction. This change in direction is constant, and so great as apparently to cause the ball successively to arrive at points around the whole circumference of the table, in about thirty hours. The ball does not in reality change the plane of its motion, so as to pass around the table, but the table revolves with the earth, and thus presents different points of arrival and departure to the ball at each successive journey across the table.

The reason of this will be apparent under the following conditions: Suppose the ball to be suspended exactly over the north pole, and the circular table placed beneath it. When the ball is set in motion it will swing backward and forward without at any time changing the plane of its motion; that is, it will constantly vibrate between the same two fixed points in space, while the rim of the table beneath is revolving with the earth around a common axis. The angle of the lines of vibration at the beginning and end of one hour will be just 15°, and relatively the ball will seem to pass successively to every point in the circumference of the table in one day. A hight of 20, 30 or 40 feet will enable any one to try the experiment. The experiment has been repeated several times in this country.

Geometrical Questions.

Our readers will perceive that many of these questions are common ones, with perhaps only a single condition changed. It is not our object to present theorems which are supposed to be entirely new, alone, but also to give, in a convenient form, a mass of geometrical material, by which the pupil may train his mathematical powers. It is one thing to teach geometrical principles—it is another to make a geometer. The first any instructor can do—the second can be done only by the pupil himself. We suggest that geometry is a fine field for the study of pure logic. The *syllogism*, in several forms, can be pointed out and explained, and be more clearly understood, by means of the demonstrations of theorems, than in any other place. In the several demonstrations, we think it would be a good exercise for those somewhat acquainted with the subject of logic, to point out the *major premises*, the *minor premises*, and mark how the conclusion is thence derived.

45. If a straight line be drawn from the center of any circle bisecting any arc, prove that this line will bisect the chord of the arc, and also be perpendicular to the chord.

46. If a straight line be drawn from the center of any circle perpendicular to any chord, prove that this line bisects the chord and its arc.

47. Draw a common tangent to two unequal circles.

48. Prove that the sum of the sides of any equilateral triangle, is less than the sum of the sides of any other triangle containing the same area.

49. Prove that the perpendicular of any equilateral triangle is three times the radius of the inscribed circle.

50. Prove that the altitude of any equiangular triangle is equal to three-fourths of the diameter of the circumscribing circle.

51. Prove that the area of the equilateral triangle inscribed in a circle, is equal to one-fourth of the area of the equilateral triangle circumscribed about the circle.

52. Prove that in every right angled triangle, the square on the hypothenuse is equal to four times the area of the triangle, plus the square on the difference of the other two sides.

53. Given two equal circles described on the diameter of another circle—the inner circles being tangent to each other and to the outer circle—describe a fourth circle which shall be tangent to each of the given circles.

54. In a given circle describe an equilateral triangle.

55. In a given circle describe a square.

56. In a given circle describe an equilateral polygon of five (or six, or eight, or nine, or ten, or twelve) sides.

57. Prove that the line which is drawn parallel to the base of any give equilateral triangle, cuts off an equiangular triangle.

58. Prove that triangles having the same or equal bases are to each other as their altitudes.

A New Desk.

A friend in Maumee city thus writes us, in regard to a new school-desk. If it be any thing really valuable, we hope that those concerned in building school houses will be made acquainted with it. We have not seen it, and therefore cannot say any thing about it, commendatory or otherwise.

"We have an 'improved school desk,' here in Maumee city, which we wish you to know something about, and tell it to the readers of your excellent paper. It is so formed that each scholar is furnished with a separate desk, seat, and book case, which he can approach, enter his seat, or leave it without jostling or disturbing any other—whether to approach his teacher, to leave the room, or for any other purpose. It is believed to be the most comfortable and convenient, both for teacher and scholar, of any school room in the State.

A. SPAULDING, M. D."

ITEMS.

☞ The City Council have at last, by a vote of 22 to 20, decided to sanction the late contract between the Board of Education and the Woodward and Hughes trusts. This contract requires the immediate erection of one or two buildings for the purposes of a Central High School. There are one or two unimportant conditions annexed. More in our next number.

☞ On Friday afternoon, May 16, while the pupils of the First District Schools were assembled in the Principal's room, for the purpose of exercising in vocal music, the following incident occurred: Miss Elisabeth Spooner, one of the teachers of the house, before entering the room, had taken a final leave of her scholars, she having resigned her situation as a teacher in the public schools, at the last meeting of the Trustees. After the singing of two or three songs, Miss Bailey, a sweet little girl of about ten years of age, approached the teacher's desk, and addressed her teacher, Miss Spooner, in the most affectionate language, expressing deep regret at the parting, and concluded with presenting her, on behalf of the pupils, with a beautifully illustrated copy of Shakspeare.

During the remarks, the little girls appeared much affected, and Miss Spooner was entirely overcome. Mr. Storer, the President of the School Board, then came forward, and on behalf of the teachers of the house, presented to their retiring co-laborer, a magnificent volume, entitled, "Leaflets of Memory." In his remarks, Mr. S. spoke very highly of the services of Miss Spooner in the cause of popular education, and said that the members of the School Board deeply regretted they could no longer have her assistance. She has been teaching over seven years in the public schools, six years of which has been spent in the First District. Her pupils were deeply attached to her.—*Daily Times.*

☞ Between 70 and 80 juvenile vagrants have thus far been sent up to the House of Refuge, for reformation. All who come to visit this city shold not fail of visiting the House of Refuge. Its large accommodations, and admirable arrangements, will amply repay the expense of considerable time and trouble. It is decidedly the best finished and furnished building for similar purposes in the United States. Its entire seclusion amid some very beautiful scenery, its fine buildings, cold and warm baths, well arranged sleeping rooms, work shops, play grounds, etc., etc., all render it well adapted to recall the young offender from a life of crime, and reconduct him back to the paths of virtue and respectability.

☞ Jenny Lind and her concerts left behind, in this city, the sum of $3,463 80, for charitable purposes. This sum was given into the hands of the Mayor, and divided among 14 benevolent societies, to promote the objects for which they were instituted.

☞ In speaking of the Exhibition of the Public High School of Columbus in our last, the types say, "the music composed entirely by the school children," etc. It should have read, "the music performed by a choir composed entirely of school children, added much to the interest."

☞ More than 1200 Teachers have been instructed in the Institutes which have been attended in different parts of the State this spring; but three or four times this number might have been assembled, could competent instructors have been secured.

☞ We learn from the Fort Meigs Reveille, that Professor A. D. Wright, widely known as the Superintendent of the Perrysburg Union School, has resigned his situation. The reason assigned, is the desire on the part of Mr. Wright "to resume and finish some literary labors long since commenced, and too long deferred." His resignation was accepted. No successor is mentioned.

☞ The Huron and Erie County Teachers Association holds a meeting at Milan, on the first Saturday in June. Mr. L. Andrews, Chairman of the Executive Committee of the State Teacher's Association will address the meeting. Topics generally interesting to schools will be discussed, and especially such as relate to the improvement of schools in Erie and Huron counties.

☞ Nathan Bishop, Esq., the former Superintendent of the Public Schools of Providence, R. I., has been elected Superintendent of the Public Schools of Boston, Mass. His salary is $2500 per annum.

☞ Barnum Field, Esq., one of the oldest of the Boston teachers, died on the evening of Wednesday, May 14, of Neuralgia. He was for many years at the head of the Franklin School. It is by such men as Mr. Field, that Boston Schools have attained such a country-wide reputation.

☞ At the Muskingum County Teachers' Association, the following was introduced by Mr. Batcheldor, and unanimously adopted:

Resolved, That sound policy, and the best interests of Education, require the yearly appropriation of a portion of the income of the surplus revenue for the support of Teacher's Institutes.

Mr. Eaton addressed the Association at length on the *importance* of irreproachable character, and well regulated habits of teachers.

☞ From the "Gleaner," we take the following statistics of attendance in the Sandusky High School. The weekly absence and tardiness is 19 per cent. of which 16½ per cent. is for tardiness of from one to three minutes, and nearly the entire amount was within six and a half minutes. During the first third of the term there was less than two per cent of delinquencies of any kind. The general average of attendance for all the pupils in the Columbus Schools, numbering 1777, was 72½ per cent. The average of those connected during the past quarter was 87 per cent. Twenty-five pupils in the High School attended every day during the quarter. Mr. D. C. Pearson, of the North District Grammar School gives the following names of pupils who were not absent a whole day, nor tardy without excuse, during the quarter: J. H. Bartlitt, G. Drake, C. Fulton, E. Hannmo, A. Morris, J. W. Myers, J. Norris, T. Phinney, R. Riordan, L. E. Miner, L. Dinu—9 boys, and 2 girls.

☞ The Summer Session of the Litchfield Center School, commenced on Monday, the 28th of April last, with bright prospects. The attendance was much greater and more regular than during the last term. In the winter and spring term, the Select School Department numbered 52 pupils—absentees, 8¾ per cent. Common School Department, taught by Mr. H. S. Taylor, 45 pupils—per cent. of absentees, 8½. The present session is superintended by J. E. Bacon, assisted by Mrs. H. J. Bacon. In Common School Room, 63 pupils—absentees, 4¼ per cent. tardy, 2¾ per cent. Select School Department, 3 per cent. of absentees, tardy, 3 1-10 per cent. Whole number of scholars, 115—males, 52; females, 63. J. E. B.

☞ Phonotypy has been introduced into the public Schools in St. Louis, as an experiment. Fifty pupils, of from 4 to 7 years of age, have been placed under the charge of Mr. E. F. Underhill. If the experiment is successful, phonotypy will be at once introduced as a branch of primary instruction.

The colored schools in this city have introduced the phonetic system of reading into their schools, under the charge of Mrs Burns. We have not the slightest doubt ourselves, but that this system will ultimately succeed, and completely root out the present incongruous system. It will require much time for the change to take place, but it is bound to go.

☞ There are in Indiana, 175,017 persons over 21 years of age, or more than one third of the adult population, who can not read or write.

☞ The town of Brookline, near Boston, Massachusetts, containing less than 3000 acres, has the honor of raising a larger sum for education than any town in the State, having appropriated $10 52 for every child of school age.

☞ Sir Robert Peel's father determined to bring up his son expressly for the House of Commons. When quite a child, he would set him on a table and promise him a cherry if he would make a speech. The applause which followed every successful effort, stimulated him to effort, so that by the time he was ten years old, he could address company with some degree of eloquence. As he grew up, his father made him repeat, every Sunday, as well as he could, the sermon he had heard; in this way was formed that habit of attention for which he was so remarkable. In after years, few were aware that his power of remembering accurately the speech of an opponent, and of replying to his arguments in regular succession, was originally acquired at the church he attended when a child.

☞ The thousandth anniversary of the foundation of the Russian Empire, which dates from the year 852, is to be celebrated next year with great pomp, in the cities throughout the Empire.

☞ More than $15,000 worth of property has been destroyed in Utica, N. Y., during the last year and a half, in some forty or more fires, all of which have been set by some five or six young men (or large boys) belonging to two engine companies. The only reason any of them assign is, "they wanted a little fun." The habit of running after engines and delighting in the excitement produced by a fire, was doubtless formed when these boys should have been in school, but many

parents can not think of *compelling* a child to attend school. O no. He may stay away upon every trivial pretext, or if he plays truant, the Teacher is requested to "excuse Johnny for his absence yesterday," without any intimation that he had leave of absence, or that it was not in wilful opposition to the parent's known wish, and in utter disregard of the teacher's authority. And yet, if, with these and various other opposing influences, the teacher does not succeed in awakening in the boy's mind a love of study, and securing rapid improvement, and more than this, if he does not teach this wilful, wayward, truant scholar to love him, to love the quiet and order of the school room, to love regularity and system, why "he is utterly incompetent to teach," "altogether unfit to manage a boy of spirit."

☞ Many teachers are troubled at the frequent recurrence of a word or words which their reading classes almost invariably mis-pronounce. Repeated correction seems to avail but little. Some of our friends have used the plan of writing the offending words on a black-board, in full view of the whole class, and then requiring all the pupils to pronounce them in concert. Every, and history, pronounced *evry*, *histry*, are words of this class.

☞ By the liberality of Congress, the Common School Fund of this State has received quite a large addition. This is further increased by a special appropriation of the State Legislature, by an act dated March 24, 1851. The enactment is as follows:

"That the net proceeds which may hereafter be paid into the State Treasury, from the sales of swamp lands, granted to the state of Ohio, by act of Congress passed September 28, 1850, be, and the same hereby is, hereby appropriated to the general fund for the support of Common Schools; and the state of Ohio is hereby pledged to pay the interest, annually on any and all sums of money which may be paid into the State Treasury, from the sales of said lands, from the receipt of such money into the treasury aforesaid; and the interest arising as aforesaid, shall be funded, annually, until the first day of January, in the year eighteen hundred and fifty-five; after which time the said interest shall be annually distributed to the several counties in this State, in proportion to the number of white male inhabitants above the age of twenty-one, as by law shall be ascertained, for the apportionment of representatives; and the proportion of interest due to each and every such county shall be distributed for the support of Common Schools in the respective counties in the manner prescribed in the "Act to provide for the support and better regulation of Common Schools."

"Pa, have guns got legs?"
"Why, no James.
"How do they kick, then?"
"They kick with their *breeches*, my son."

For the School Friend.

Education and Common Schools.

When parents become indisposed to the character and welfare of the school to which they send their children, the inevitable consequence must be, that this indifference will spread from family to family, from school to school until at last the effect becomes so deeply seated, so permanently settled, that year after year, all exertion for reform seems like scattering seed upon barren and unproductive soil, producing no good result, except it be, of a blasted and worthless kind.

Again, many of those who style themselves Teachers, are often so unqualified for the station, that the profession has been lowered in the estimation of the public. The consequence is, that a mountain weight presses down the energies, and completely destroys the exertions of many of the most competent and talented Teachers. Never will any set of men, prepared fully for the work, enlist with energy and zeal in the profession so long as such an incubus or nightmare is resting upon them—Never will they enrol their names on the list of Teachers, so long as the pursuit of such a calling shall be so scantily remunerated as it is at present,—so long as the avenues of wealth, influence, and every form of pecuniary aid, and respectability of profession, and rank in society, are shut against them,—while the same talents, and the same mental acquirements, merged into the profession of law, will shine at the bar, and call forth the popular applause of thousands, and gain the adulation of countless throngs by their eloquence, and the consequent indemnification for office holding, and rank in society, enable them to roll and banquet in luxury. But we may indulge the hope that this distinction may not always last—that the time will soon arrive when Teachers shall have a glad time of rejoicing—a time when they will have a prize set before them to stimulate them to industry and perseverance in the work of humanizing their oppressors, and effecting a reform in our schools, the name and fame of which act, shall be more honorable than the badge of civil authority, or the laurel wreath of the conqueror. In hope of this time, let every one commence and penetrate the merits of every question relating to this object.

"Let those who are preparing for the enterprise, (viz: that of becoming public teachers,) observe closely and think correctly;" learn to test every theory by the unerring rule of practice; and never adopt the opinions of others without having first been convinced that they are not at variance with the laws of truth and reason. Nor should we hesitate to combat with error in whatever shape it may present itself, but

"Seize upon truth where'er 'tis found
On Christian or on heathen ground,"

and thus act, at all times and under all circumstances, in accordance with our convictions of right and duty. By persevering in this path, we shall see the outbreaking sun-beam of a universal day calming down, and clearing away the misty clouds of darkness that have hung o'er our heads, and a bright mental horizon disclosed to our view. But if we begin to doubt and hesitate, and stop on the very brink of action, the great object of our efforts will fall powerless at our feet. A firm determination to be *active* and *vigilant* should be the motto of us all.

It must be remembered by all, that, to effect a *still greater* reform in our Common Schools than has been done, that great labor, and great pains must be taken. Every one has a work to do; something to accomplish; and however small that something may be, it is the union of all our efforts that must lead us to ultimate success. Let every one of us who professes to be a *true* Teacher, ever remember these beautiful lines:

"The *good* begun by *thee* shall *onward flow*
In many a branching stream, and wider grow;
The seeds, that in these few and fleeting hours
Thy hands, unwearied and unsparing sow,
Shall deck thy grave."

For the present, I close, hoping that the readers of the "Friend" will bear with me, as I have passed over but a small part of the ground marked out at the commencement. More on this subject will be forthcoming hereafter.

J. E. B.

Litchfield, Medina County, O.

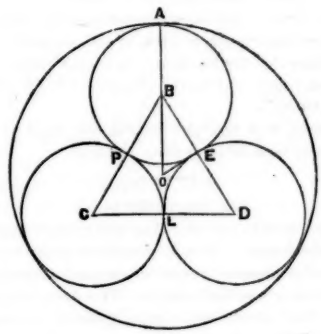
I love it—I love it—the laugh of a child,
Now rippling and gentle, now merry and wild;
Ringing out on the air with its innocent gush,
Like the trill of a bird at the twilight's soft hush;
Floating upon the breeze like the tones of a bell,
Or the music that dwells in the heart of a shell.
Oh! the laugh of a child, so wild and so free,
Is the merriest sound in the world for me!

One small spot
Where the tired mind may rest—and call it Home—
There is a magic in that little word—
It is a mystic circle, that surrounds
Comforts and blessings never known beyond
The hallowed limit.

MATHEMATICAL DEPARTMENT.

SOLUTIONS.

QUESTION 1, BY J. W. MORRISON.—Three equal circles touch each other externally, and inclose between the points of contact, one acre of ground. What is the radius of their circumscribing circle?



SOLUTION, BY R. W. MCFARLAND.—BCD is an equilateral triangle; the three sectors, BEP, DEL, and CPL, having their central angles each 60°, together make up an area equal to half the area of the small circle. Since $60° \times 3 = 180°$, or a semi-circumference; the triangle BCD, is, therefore, equal to half the circle + 160 rods.

Let x = rods in the radius BE, then one half the circle $= \frac{\pi x^2}{2}$, and the area of the triangle BCD, of which each side is $2x$, is $x^2\sqrt{3}$. Hence, $\frac{\pi x^2}{2} + 160 = x^2\sqrt{3}$, by clearing of fractions, etc.

$$x^2 = \frac{320}{2\sqrt{3} - 3.1416} = 31.5 \text{ rods} = \text{BE}.$$

The angle $\text{OBE} = 30°$; hence, $\text{OE} = \frac{1}{2}\text{BE} = 15.75$ rods; when BO = 35.22 rods, nearly, which added to AB (31.5) gives AO = 66.72 rods, nearly.

QUESTION 2, BY D. JAMIESON.—Two laborers, A and B, whose rates of working are as 3 to 5, were employed to dig a ditch. A worked 12 hours, and B 10 hours a day: B being called away, A worked one day alone, in order to complete the work: when they were paid, B received as many cents more than A, as the number of days they worked together. Now had B been called away a day sooner, A would have received 47 cents more than B at the conclusion of the work. Required their respective daily wages, on the supposition that the payment of each was in proportion to the work performed.

SOLUTION, BY DR. JOEL E. HENDRICKS.—Let x = the number of days that A and B worked together. Then, because by taking from the amount B received, the amount he would earn in one day, and adding it to the amount A received, we would thereby diminish the amount B received, and increase the amount A received by the same quantity, viz., by the amount B earns

in one day. Therefore, the difference caused by this process, between the sums to be paid to A and B respectively, would be twice the amount that B would earn in one day. But by the question this difference $= (x + 47)$ cents.

Therefore, $\frac{x+47}{2}$ = B's daily wages.

Again, by the question we have, A's daily wages to B's, as 36 : 50, or as 18 : 25. Therefore we have,

$$\frac{x+47}{2} \times \frac{18}{25} = \frac{9x+423}{25} = \text{A's daily wages.}$$

Consequently, the difference between A's and B's daily wages is $\frac{7x+329}{50}$. And because this difference multiplied by the number of days they worked together, is, by the question, equal to A's wages for one day + the number of days they worked together.

Therefore we have $\frac{7x^2+329x}{50} = \frac{9x+423}{25} + x$, whence we get $x^2 + \frac{261}{7}x = \frac{846}{7}$. Or $x = 3$.

Consequently, $\frac{x+47}{2} = \frac{3+47}{2} = \frac{50}{2} =$ 25 cts., B's daily wages.

And $\frac{9x+423}{25} = \frac{27+423}{25} = \frac{450}{25} = 18$ cents, A's daily wages.

Having received but one solution to Solomon Wright's problem, we republish it in this number, and call special attention to it.

ACKNOWLEDGEMENTS.—Both questions were solved by Messrs. R. W. McFarland, John B. Trevor, D. Jamieson, C. Ihmsen, P. Cardan, and Dr. Joel E. Hendricks.

QUESTIONS.

1. *Problem.* BY SOLOMON WRIGHT. (Republished from the April Number.) If equilateral triangles be described on the three sides of any rectilineal triangle, and the center of these triangles be joined by straight lines, the triangles thus formed, will be equilateral. Required a demonstration.

2. *Question.* BY D. JAMIESON. (Republished from the May No. to correct an ambiguity.) It is required to form a triangle, within a given triangle, by lines drawn parallel to its three sides, so that the equal angles of the two triangles, being respectively joined by straight lines, the internal triangle, and the three trapezoides thus formed, shall be all equal to each other.

Love.

BY CHARLES SWAIN.

Love?—I will tell thee what it is to love:—
It is to build with human thoughts a shrine
Where hope sits brooding like a beauteous dove,—
Where time seems young, and life a thing divine!
Yes, THIS is love—the steadfast and the true,
The immortal glory which hath never set;
The best, the brightest boon the heart e'er knew,
Of all life's sweets, the very sweetest yet!

ABSTRACT OF THE METEOROLOGICAL REGISTER,

KEPT AT

Woodward College, Cincinnati.

Lat. 39° 6′ N.; Long. 84° 27′ W.

150 *feet above low water mark in the Ohio.*

BY JOSEPH RAY, M. D.

April, 1851.

Day of M.	Fahr'heits Therm'ter. Min.	Max.	Mean Tem.	Barometer. Mean hight	Wind. A. M.	P. M.	Force	Weather	Clearness.	Rain
1	53	71	63.5	29.379	south	south	1	cloudy	0	.39
2	50	67	56.5	29 270	west	west	1	var'ble	4	.01
3	41	66	51.0	29.377	n w	n w	2	clear	10	
4	41	74	60.0	29.122	west	s w	2	var'ble	5	.56
5	41	53	46.7	28.652	s w	west	3	cloudy	0	.03
6	39	61	47.8	29.267	n w	n w	2	fair	8	
7	40	65	56.2	29.240	south	south	1	var'ble	1	.28
8	41	51	45.0	29.254	n w	n w	3	var'ble	5	
9	35	65	49.7	29.560	west	west	2	clear	10	
10	41	74	58.5	29.604	n e	n e	1	fair	9	
11	41	59	46.7	29.774	n e	n e	1	clear	9	
12	34	64	49.8	29.617	n e	n e	1	var'ble	4	.27
13	43	57	49.0	29.005	n e	n e	1	cloudy	0	.02
14	40	48	41.7	29.094	north	north	1	cloudy	0	
15	31	60	48.5	29.160	north	north	1	clear	10	
16	36	53	46.5	29.182	n e	n e	1	var'ble	5	
17	47	68	55.0	29.167	west	west	2	var'ble	5	
18	43	72	60.5	28.947	west	west	2	var'ble	3	
19	47	59	52.0	28.807	west	west	3	var'ble	1	
20	44	51	45.0	29.199	n w	north	2	var'ble	1	
21	36	51	43.3	29.420	north	north	2	var'ble	2	
22	34	66	49 3	29.394	west	west	2	clear	10	
23	38	74	58.3	29.228	s w	s w	1	var'ble	5	
24	48	72	56.0	29.123	s w	s w	1	var'ble	5	
25	42	78	58.8	29.194	n e	n e	1	clear	10	
26	47	77	59.5	29.170	n e	north	1	fair	6	
27	48	72	55.7	29.187	n w	n w	4	var'ble	5	
28	42	57	47.3	29.443	n w	n w	2	var'ble	3	
29	40	69	55.8	29.295	n e	n e	1	var'ble	3	.17
30	43	59	48.2	29.317	n w	n w	1	fair	6	

EXPLANATION.—The first column contains the day of the month; the second, the minimum or least hight of the thermometer, during the twenty-four hours, beginning with the dawn of each day; the third, the maximum or greatest hight during the same period; the fourth, the mean or average temperature of the day, reckoning from sunrise to sunrise; the fifth, the mean hight of the barometer, corrected for capillarity, and reduced to the temperature of freezing water. In estimating the force of the wind, 0 denotes calm, 1 a gentle breeze, 2 a strong breeze, 3 a light wind, 4 a strong wind, and 5 a storm. In estimating the clearness of the sky, 10 denotes entire clearness, or that which is nearly so, and the other figures, from 0 to 10, the corresponding proportionate clearness. The other columns need no explanation.

SUMMARY—

Least hight of	Thermometer,	31°
Greatest hight of	"	78°
Monthly range of	"	47°
Least daily variation of	"	7°
Greatest daily variation of	"	36°
Mean temperature of month,		52°
" "	at sunrise,	43°.2
" "	at 2 P. M.,	63°.8
Coldest day, April 21st.		
Mean temperature of coldest day,		41°3.
Warmest day, April 1st.		
Mean temperature of warmest day,		63°.5
Minimum hight of Barometer,		28.652 inches.
Maximum "	"	29.774 "
Range of "	"	1.122 "
Mean "	"	29.2452 "

Number of days of rain, 8.

Perpendicular depth of rain, 1.7 inches.

WEATHER.—Clear and fair 10 days; variable 16 days; cloudy 4 days.

WINDS.—N., 4 days; N. E., 7½ days; S., 2 days; S. W., 3 days; W., 7 days; N. W., 6½ days.

MEMORANDA.—1st to 7th, mild and showery; 9th, frost; 9th to 12th, very pleasant; 12th, shower in night; rest of month, cold, dry and frequently windy.

OBSERVATIONS.—The mean temperature of this month is about three degrees less the average mean temperature of the month; it is still, however, three degrees warmer than April, 1850.

The quantity of rain is just one-half the average amount for the month. The characteristic features of the month this year, therefore, are its coldness and dryness; these, however, are not very remarkable.

The most singular feature, however, is the inversion of temperature in relation to the season, the first day of the month being the warmest in it, and the first part of the month warmer than the last.

The mean temperature of the first ten days was 53°5; of the second ten 49°5; and of the third ten 53°. This shows that the first third of the month was four degrees warmer than the second third, and a half a degree warmer than than the last third.

Recollecting that the first part of the month was showery, it will be readily perceived that it was favorable to the progress of vegetation; while, on account of the cold and drouth, the last two thirds of the month was unfavorable.

Owing to the dry state of the atmosphere, the cold weather of April did not injure the fruit buds; but, on the morning of May 2d, a frost of unusual severity occurred, which almost entirely blasted the prospect for fruit in the Southern and Western parts of Ohio; and, so far as we have learned, in the adjoining States South and West. The Thermometer stood at 27°, which was 7 degrees lower than it had fallen here in May, in the last seventeen years.

Maternal Influence.

Gov. Briggs, in a lecture on Popular Education, recently delivered, related the following impressive incident:—

I remember, twelve or fifteen years ago, I left Washington, three or four weeks during the spring; while at home, I for the first time possessed myself of the letters of Mr. Adams' mother, and read them with exceeding interest. I remember an expression in one of the letters addressed to her son, while yet a boy of twelve years old, in Europe. Says she: "I would rather see you laid in your grave, than that you should grow up a profane and graceless boy." After I returned to Washington, I went over to Mr. Adams' seat, one day, and said I, "Mr. Adams, I have found out who made you!"

"What do you mean?" said he.

I said, "I have been reading the letters of your mother!" If I had named that dear name to some little boy, who had been for weeks away from his dear mother, his eye could not have flashed more brightly, or his face glowed more quickly, than did the eye and face of that venerable old man, when I pronounced the name of his mother. He started up, in his peculiar manner and emphatically said—

"Yes! Mr. Briggs, all that is good in me I owe to my mother."

☞ Whoever wishes to get along through the world, has only to take lessons of a hen chasing a grasshopper through the field. With a long neck and peeled eyes, take a few hurried strides, stop short, peep over, peep under, now to the left, then to the right, one flutter—and you have him.

METEOROLOGICAL TABLE, EXTENDING THROUGH THIRTY-FIVE YEARS

☞ For the following tables we are indebted to the *Western Horticultural Review*, an interesting and valuable work edited by Dr. JOHN A. WARDER of this city. They will be found worthy of preservation as sources of reference and comparison. The progress of vegetation, and the phenomena of the seasons, furnish an endless source of contemplation to an ingenious and inquiring mind.

Year	Greatest daily variation.		HOTTEST DAY IN THE YEAR.					COLDEST DAY IN THE YEAR.					Av. of year.	WHITE FROST.		WINDS AT NOON.							
	Deg.	Mo.	Sunrise.	Noon.	Sunset.	Month and day.	Mean.	Sunrise.	Noon.	Sunset.	Month and day.	Mean.		Last in Spring.	First in Autumn	North.	N. east.	N. west	South.	S. east.	S. west.	East.	West.
1814	40	3	73	95	80	July 5	82	4	18	16	Dec 19	13	53	May 17	Oct 7	16	9	33	63	31	117	27	69
1815	40	4	79	94	82	" 30	81	—10	7	5	Jan 30	2	52	" 20	" 9	27	12	32	59	20	106	19	90
1816	43	5	71	96	82	Aug 25	79	— 8	9	7	Feb 8	7	52	" 15	" 8	13	4	23	59	28	153	21	65
1817	39	5	72	95	75	July 29	78	—10	5	— 1	Jan 18	— 2	54	" 21	" 10	31	6	22	62	42	145	14	43
1818	37	3	77	95	80	Aug 25	85	—10	4	0	Feb 9	— 2	51	" 5	" 5	26	9	13	48	44	159	19	47
1819	40	6	74	94	82	" 5	82	6	10	8	Dec 31	8	54	April 22	" 11	19	19	41	47	36	127	23	53
1820	42	3 / 6	72	98	84	" 11	82	—10	15	12	Feb 1	6	53	May 9	" 12	15	26	54	46	36	110	12	67
1821	39	10	77	94	80	" 2	82	—10	11	3	Jan 25	4	51	April 19	" 9	11	33	59	25	59	119	11	48
1822	40	4	75	92	80	July 7	81	—10	4	4	Dec 3	— 8	53	" 29	" 13	2	27	82	16	63	132	12	31
1823	44	10	76	94	83	" 2	81	—10	8	5	Feb 7, 8	1	53	May 6	" 22	5	22	90	16	36	150	18	28
1824	38	2	79	94	84	June 29	84	—10	7	6	Feb 1	1	53	April 30	" 15	4	33	93	17	50	136	5	28
1825	40	4	74	97	82	Aug 14	83	— 2	17	16	Dec 13	10	54	May 2	" 18	2	44	89	13	58	142	5	12
1826	38	4 / 10	74	94	80	May 2	82	—10	6	0	Jan 24	— 1	54	April 30	" 26		33	97	19	74	124	3	15
1827	37	2 / 10	74	93	82	July 1, 11	81	— 5	7	5	" 1, 18	3	53	May 8	" 17	4	45	98	5	59	138	6	10
1828	39	7	79	93	82	Aug 5	84	7	16	15	" 21	13	55	" 8	" 2	3	31	90	3	45	186	1	7
1829	33	3	74	93	80	June 27	80	— 2	10	8	Feb 12	5	51	" 13	Sept 8	2	30	108	3	55	155	1	11
1830	42	9	74	96	84	July 18	82	—10	— 2	— 5	Dec 21	— 6	54	" 25	" 18	2	26	97	6	54	165	4	11
1831	38	4	66	95	80	Aug 11	80	—10	4	0	" 15	— 2	53	" 25	" 28	1	31	80	3	58	169	4	19
1832	41	4	74	97	82	June 10	82	—10	— 2	— 4	Jan 25	— 5	52	" 25	" 23		46	80	6	50	173	1	10
1833	42	4	76	95	80	July 20	82	— 5	10	7	Mar 2	— 5	53	April 9	Oct 4		44	80	12	67	143	7	12
1834	40	5	78	97	87	" 22	86	— 9	5	4	Jan 5	1	53	" 26	Sept 26	5	43	96	4	55	133	7	22
1835	38	4	72	91	80	Aug 12	80	—10	— 4	— 5	Feb 7	— 6	50	May 16	" 15		44	75	2	57	158	2	27
1836	40	5	70	93	82	July 31	80	—10	8	3	" 1	0	50	" 10	" 30		43	85	9	65	133	7	24
1837	30	4	74	91	82	" 12	78	0	12	10	Jan 3	7	51	" 20	" 23	1	27	88	1	62	161	1	24
1838	42	9	75	95	85	" 18	83	—10	6	4	Dec 23	0	50	" 26	" 3	1	33	67	4	57	165	3	25
1839	39	4	76	92	84	Aug 10	82	—10	8	12	Nov 25	3	55	" 4	" 13		39	93	4	61	134	3	31
1840	34	11	73	91	83	J, Jy, A	80	— 4	10	12	Jan 16	6	53	April 20	" 12	4	38	92	10	63	105	5	49
1841	37	3	78	90	85	June, Jly	84	—10	1	1	" 18	— 3	53	May 8	" 30	4	48	77	15	67	103	5	46
1842	35	8	75	88	82	July 14	81	0	10	11	Dec 23	7	53	" 5	" 23	12	39	51	31	43	108	31	50
1843	28	4	75	88	87	Sept 11	83	0	10	11	Feb 1	7	50	April 10	Oct 13	32	28	49	37	49	94	24	52
1844	30	4	77	87	82	July 1	80	— 1	13	10	Jan 29	7	54	" 30	" 7	22	26	53	28	52	102	27	56
1845	39	9	74	87	85	" 6	82	—10	2	3	Dec 10	— 5	53	May 8	Sept 20	26	20	45	46	39	103	20	66
1846	36	4	80	90	85	" 21	83	0	11	14	Feb 26	8	55	April 13	Oct 18	29	36	34	57	40	69	43	57
1847	33	4	74	85	82	July, Au	79	2	6	6	Jan 19	5	53	May 5	" 13	31	26	37	62	31	86	36	56
1848	29	3	75	86	84	July, Au	78	—10	6	10	" 10	6	53	April 27	Sept 22	35	23	49	57	43	78	26	55

Year	Days of West. winds in year.	WEATHER. Clear.	Cloudy.	Rain.	Snow.	Th. and Lt.	Fog.	Peach Trees Blossom.	CROPS OF VARIOUS KINDS. Apples.	Peaches.	Papaws.	Mast.	Wheat.	Corn.
1814	249	186	59	95	25	19	18	April 2						
1815	228	19	64	94	16	16	12	Mar 26						
1816	241	205	70	81	10	10	4	April 7						
1816	210	171	75	103	16	5	4	" 13				plenty		middling
1818	219	184	84	81	16	9	2	" 15	good	v great	plenty		good	good
1819	221	182	65	94	24	7	5	" 11			scarce		"	"
1820	231	220	51	76	19	19	5	" 9	scarce	v scarce	v scarce		"	"
1821	226	204	46	90	25	15	3	" 15	plenty	scarce	v plenty	plenty	v bad	"
1822	245	197	42	113	13	14	7	" 4	scarce	"	v scarce	noue	light	"
1823	268	185	49	119	12	17	5	" 18	plenty	"	v plenty	plenty	middling	middling
1824	257	184	74	96	12	16	2	" 13	plenty	plenty	scarce	none	light	good
1825	243	205	61	96	3	17	9	Mar 31	none	none	v scarce	plenty	middling	"
1826	236	200	48	104	13	24	11	April 15	plenty	plenty	plenty	b m pl	good	"
1827	246	172	70	101	12	28	11	" 3	plenty	"	"	plenty	middling	"
1828	283	181	65	116	4	21	6	Mar 25	v scarce	none	"	"	"	"
1829	274	174	66	107	18	29	8	April 28	plenty	plenty	"	"	good	v good
1830	273	194	74	87	10	29	10	" 5	none	scarce	scarce	scarce	v good	bad
1831	268	169	91	89	16	20	8	*none*	plenty	none	"	"	light	"
1832	263	191	77	85	13	15	5	few, Ap	scarce	"	"	little	v fine	g and b
1833	235	197	72	84	12	20	8	April 9	v plenty	plenty	rath scar	plenty	good	good
1834	251	216	62	82	5	21	5	" 6	none	none	very few	none	"	g and b
1835	260	192	70	93	10	27	8	" 25	v plenty	a few	scarce	plenty	bad	middling
1836	242	197	69	89	11	17	9	" 26	scarce	"	"	scarce	"	"
1837	273	196	71	83	15	25	10	" 20	plenty	plenty	plenty	plenty	"	good
1838	267	218	58	75	14	28	2	*none*	very few	none	scarce	scarce	good	middling
1839	258	200	92	64	9	21	4	*none*	none	"	"	b m pl	v good	"
1840	246	186	77	91	12	27	5	April 8	plenty	v plenty	"	scarce	good	"
1841	226	190	82	79	14	19	5	" 25	scarce	scarce	plenty	plenty	middling	"
1842	209	202	75	81	7	22	8	Mar 21	v plenty	plenty	"	"	good	good
1843	195	174	88	88	15	18	2	May 1	plenty	"	"	none	"	"
1844	211	173	86	95	12	30	4	April 6	scarce	scarce	"	short	middling	middling
1845	214	205	55	95	10	18	5	*none*	"	"	"	"	"	"
1846	160	179	82	90	14	20	4	April 12	"	"	"	mid	good	good
1847	179	193	57	101	14	29	9	" 14	"	"	"	good	"	"
848	182	195	80	84	7	12	7	" 10	plenty	"	scarce	mid	"	"

MISCELLANEOUS REMARKS.

1815–June 16. Heavy rain; creek highest known.
1817. Locusts appear in April.
1819. Very dry summer.
1820. Very dry fall.
1825. Spots on sun in August. Comet in September. Weevils destroy wheat, and injure most other kinds of grain.
1826. Some weevils in wheat.
1827. No weevils this year.
1828. A few weevils.
1829. Very plentiful crops, except buckwheat.
1830. Very dry summer.
1831. Wet; the average of the year ten degrees colder than before.
1832. Ohio very high in February. Cholera in Cincinnati.
1833. Very good crops. Cholera.
1834. Very hot summer. Locusts in May. Cholera in Cincinnati.
1835. Hard frost in May, but no damage.
1836. Fruit scarce, except currants.
1837. Fruit plenty; potatoes bad.
1838. Little fruit. Wells dry in September and December.
1839. Little fruit. Wells dry most of the year.
1840. Fruit plenty where it failed last year.
1841. Fruit scarce except papaws.
1842. Fruit very plenty.
1843. A comet in March.
1844. A blight on apples and pears.
1845. Bad fruit year.
1847. Great flood, December 17.

Nuts for Grammarians.

The Boston Transcript publishes "a conversation between a young lady who writes for the magazines, and an old gentleman who can speak English."

Old Gentleman.—"Are there any new houses building in your village?"

Young Lady.—"No, sir. There is a new house being built for Mr. Smith, but it is the carpenters who are building."

Old Gentleman.—True; I sit corrected. To be building is certainly a different thing from to be being built; and how long has Mr. Smith's house been being built?"

Young Lady—(Looks puzzled a moment, and then answers rather abruptly.) "Nearly a year."

Old Gentleman.—"How much longer do you think it will be being built?"

Young Lady.—(Explosively.) "I don't know"

Old Gentleman.—"I should think Mr. Smith would be annnoyed by its being so long being built, for the house he now occupies being old, he must leave it, and the new one being only being built, instead of being built as he expected, he can not"——

The young lady leaves the room very suddenly.

We think it quite time that the innovation or affectation rebuked by our intelligent correspondent, in our columns some weeks ago, and reproved in the above "Nut," were abandoned. "Being built" does not express progress in building. A house "being built" is a house already built. Put into Latin, it is *existente erecto*. We say, for instance, "John sold his land to Peter, a house being built on the land;" or, if a house be in the process of erection, we say, "a house being, at the time, building on the premises." This is English. It means *in* building, or on building. The preposition is often supplied by the use of the article *a*. Thus St. Peter says, "when the temple was a building in Jerusalem." Throw the "being built" to the hypercrites.

Truants from School.

The first case under the new law of Massachusetts concerning truant children, and absentees from school, came before a Justice's Court in Boston a few days ago. The defendant was a lad about ten years of age, and was proven to have played truant several times. His master testified that when in school he was a very good boy, but he had absented himself so frequently that his name had been stricken from the roll. He was sentenced to one month's imprisonment in the House of Reformation.

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But few of the tunes, which are almost wholly new, are the compositions of the Editors but are mainly derived from the very highest European sources; and the collection of such a mass of beautiful, chaste, classic music, evinces a degree of familiarity with the compositions of the masters, some of the most erudite character, which, we must say, does honor to the learning and research of the authors. Gems, and beautiful ideas, delicious phrases, have been eliminated from the elaborate compositions of Gluck, Handel, Mozart, Mendelssohn, Schubert, Schumann, and others, too beautiful to be lost, yet almost wholly unknown to the public in this country, and arranged with exquisite practical judgment and skill, and thus redeemed to the use of Christian worship. How much better this is than an indiscriminate collection of new and flimsy productions of unfledged choristers among us, composed at random and by wholesale, no one can be long in determining."

From the Puritan Recorder, (Boston.)

"We sat down to the examination of this latest production of these well known authors with more than usual expectations, excited by the warm praises of those Professors of Music who had examined its proof-sheets in advance of its publication. Nor were we disappointed. We found a richness and variety of psalm and hymn tunes we have never before met, compiled and arranged from the most celebrated composers of other and present times."

From Zion's Herald, (Portland, Me.)

"We have in this work the highest musical talent in ou country employed in arranging, for the benefit of the church choir, the productions of those they are proud to call their masters. It is not at all surprising that a work thus produced should be, as stated by those best qualified to judge of its merits, 'the best psalm book ever published in the country.'"

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From Saroni's Musical Times.

"It is not only in this but in all respects, that we do not hesitate to say, that Cantica Laudis is in our judgment the best book ever published."

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From the New York Courier and Enquirer.

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The following are a few of the recommendations, which are daily accumulating in the hands of the publishe

From J. H. FAIRCHILD, *Professor of Mathematics in Oberlin College.*

Professor Ray—Sir: I have read, with much satisfaction, your Algebra, Part First. It seems admirably adapted as an introduction to the study; and is such a book as no one but an experienced and successful teacher could produce. The demonstrations are sufficiently scientific, and yet not so abstract as to be unintelligible to the learner. Many authors seem to think that their reputation depends upon making their works above the comprehension of a beginner. Although some new work on algebra appears among us almost every month, yet yours was needed. I am pleased to see that the *first* edition is quite free from typographical errors, and that the language is, for the most part, logically and grammatically accurate; a remark which will not apply to all the works on algebra recently published in your city.

If you shall succeed as well in *part second* as in *part first*, the book will be welcomed by many instructors.

(Signed) J. H. FAIRCHILD.

January 5, 1849.

From P. CARTER, *Professor of Mathematics, etc., in Granville College.*

I have examined, with much interest, the copy of Ray's Algebra presented to me by your politeness. As an elementary work for beginners, and especially for younger pupils, I consider it as one of the best with which I am acquainted. Like all the elementary work- of Professor Ray, it is distinguished for its simplicity, clearness, and precision and furnishes an excellent introduction to the larger and more difficult works of this beautiful science.

(Signed) P. CARTER.

February 24, 1849.

Extract from a communication furnished for the "School Friend", by an accomplished teacher in the "CINCINNATI CENTRAL HIGH SCHOOL", *in which Ray's Algebra is used.*

"It is but a few months since this book was issued from the press, and although we are acquainted with a dozen othe Algebras of similar pretensions, and no mean value, yet from the examination of no one of them have we risen with s much pleasure and satisfaction, as from the examination of this." * * * "In graduating the plan of his work, th author has shown great care and ingenuity, and in its execution, has manifested a familiarity with the wants and difficul ties of young students, and a tact in obviating them, which has rarely been equaled. The principles are briefly stated then illustrated and impressed on the mind by a numerous and choice selection of examples. All portions of the work bear ample testimony to the truth of a remark in the preface, that every page was carefully elaborated by many years of toil in the school-room. The statement and illustrations of the principles indicate that the ignorance and misapprehud sions of the pupil were met and fathomed by a keen and watchful eye in the teacher, and the proper remedies applied and that these remedies were tested by repeated trials through a long and systematic course of teaching, and finally recorded for the use of students yet to be."

From MR. GREEN, *of the English and Classical Academy, Madison.*

I have carefully examined Ray's Algebra, Part First. The arrangement adopted in it of the fundamental principles of the science is, no doubt, the best one. The demonstrations accompanying the rules are lucid and accurate, and the examples copious enough to impress them indelibly upon the mind of the pupil. From the character of the author's arithmetic, the public had reason to expect that an algebra from the same author would be a valuable contribution to this department of science, and, in the judgment of the writer, this expectation will not be disappointed.

October 16, 1848.

From MR. ZACHOS, *Professor of Mathematics in Dr. Colton's Academy.*

I have examined Ray's Elementary Algebra, and the best recommendation I can give it, is the fact that I have adopted it in my younger classes. (Signed) J. C. ZACHOS.

September 23, 1848.

From B. C. HOBBS, *Superintendent of Friends' Boarding School, Richmond.*

I consider Ray's Algebra, Part First, worthy of a place in every school. The author has fallen upon an ingenious method of securing a mental preparation, before the more difficult exercises of the slate are required. The work is clear and comprehensive, and a selection of superior formulæ has been made for the solution of difficult problems. Could an objection be made to the work, it would be, that the subject is too much simplified. The cheapness of the work bring it within the means of every one. (Signed) B. C. HOBBS.

Ninth Month, 20, 1848.

From MR. S. FINDLEY, *Principal of Chillicothe Academy.*

After a careful examination of Ray's Algebra, Part First, I cheerfully recommend it as one of the best treatises in that department of science now extant. In its enunciation of rules it is concise and clear; in its demonstrations it is simple and philosophical; and its examples are numerous and varied: so that, in every respect, it excels as a theoretical and practical text-book for beginners, and as such is now in use in the Chillicothe Academy.

(Signed) SAM'L FINDLEY

February 26, 1849.

From MR. HOOKER, *Teacher at Mount Carmel, Ohio.*

Professor Ray—Respected sir: I have, for some time past, been examining your elementary work on Algebra; and can truly say, that, as a *primary* work, it is better suited (according to my opinion) for general use in schools, than any similar work with which I am acquainted. The transition from arithmetic to our primary works on algebra, is, generally, too great; and unless scholars have a "natural tact" for mathematics, their knowledge of numbers generally stops with *arithmetic*, as few have the courage to undertake to master a theoretical treatise on algebra. * * * I am glad to see you have made the change from arithmetic so gradual, and, at the same time so interesting. I have no doubt but your work will take precedence of all elementary treatises now in use in the Western States. * * *

(Signed) J. J. HOOKER.

February 28, 1849.

CINCINNATI PUBLIC SCHOOLS

The following is the Report of the Committee on Text Books to the Board of Directors, [*May* 1, 1849.]

"That they have examined Ray's Algebra, Part First, and find it to be the cheapest and *the best* elementary work on the science of Algebra that they have used, or that has come under their inspection. It is of a higher order than most elementary works, and at the same time, it is very simple, commencing with seventeen pages of intellectual exercises which serve as a connecting link between Arithmetic and Algebra. The whole work appears to be what the author say it is—'The result of much reflection, and the experience of many years in the school-room.' The committee, therefore recommend the adoption of the following resolution:

"*Resolved*, That Ray's Algebra, Part First, be adopted as a Text Book in the Common Schools of Cincinnati.

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S. MOLLITER, | A. L. BUSHNELL,

Committee on Text Books."

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